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ADULT AND NON-FORMAL EDUCATION NEEDS OF STREET CHILDREN IN SOKOTO METROPOLIS

Abbas Mahmud (Ph.D)¹, Ladan, MURTALA²

¹Department of Adult Education and Extension Services, Faculty of Education and Extension Services,
Usmanu Danfodiyo University, Sokoto

²Department of Social Development, Umaru Ali Shinkafi Polytechnic, Sokoto

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ABSTRACT

The study is on the street children phenomenon which has a serious implication to their lives and the entire communities. It is well recognized that these type of children are into circumstances that has permanently come to stay since the situation can never be address completely it is only some solutions are advocate for their life situation in that manner. Categories of this children are living in harsh condition of which become their mandate to act in that way and survive for a living. In the cause of this paper it was discovered that majority of street children happened to find themselves as a result of dysfunctional family, culture, domestic violence and poverty among others. In an effort to arrest street children phenomenon the paper advocates for non-formal type of education which is basically meant for any individual that want to meet his personal needs these includes: basic literacy, post-literacy, vocational education, life skill education and heath literacy skills. The paper went ahead to suggest that government officials, NGOs, communities and individual philanthropist should come together and provide a programmes meant for the street children survival for basic needs. Lastly the paper come up with conclusion.

INTRODUCTION

Education is a process of giving instructions, training young and inexperienced learners, and sometimes retraining experienced learners. It is through training and giving instructions that children acquire knowledge, skills, attitudes, and readiness for living a better sustainable life (Opara, 2010). The term Non formal Education as identified by UNESCO (2006) is “any organized and sustained activity that does not correspond exactly to the formal education. It could therefore take place both within and outside educational institutions and cater for persons of all ages. Depending on the country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life skills, work skills, and general culture. The programmes do not necessarily follow the ‘ladder’ system (Formal Education), and may have different duration and may or may not confer certification of the learning achieved.” in essence children of whatever categories are the citizen of their countries. Nigeria has different categories of children in age, tribe, religion and ethnicity going about the street for one reason or the other. These street children according to Adewale and Afolabi (2013) as cited in Babtunde (2013) are called homeless children, particularly in Western Europe. This is because they have no permanent place where they sleep. They can be found either living on the street or moving and sleeping from place to place in friends’ houses, in markets or uncompleted structures etc. These type of children are found in sokoto as in the case of any other state within the country.

Concept of Adult

When child was born will continued to grow up to the maturity of adulthood. Adult is an individual who recognized to be called

adult as a result of certain things either constitutionally, culturally, and socially. According to Collins Thesaurus of the English Language (1995, 2002) as cited in Kapur (2015) an adult is a grown-up, mature person, person of mature age, grown or grown up person (man or woman). but to American Heritage Roget’s Thesaurus (2014) also cited in Kapur (2015) an adult is a person who has reached full growth and development. An adult is a human being or any living organism that is of relatively mature age, typically associated with sexual maturity and the attainment of reproductive age (Kapur 2015). In the context of humans, the term adult has at least three distinct meanings: Biologically grown or mature person. Also means that the person (also plant or animal) has reached full growth or alternatively is capable of reproduction, And is legally adult- having attained the legally fixed age of majority as opposed to a minor In most modern societies legal adulthood is based on reaching a “legally-specified age” without requiring a demonstration of physical or mental maturity or preparation for adulthood According to Knowles (1984), “the psychological definition of an adult is one who has arrived at a self-concept of being responsible for one’s own life, of being self-directing”.

The concept of adult, received different definition like adult education, which has been defined by many different authors and writers from different perspectives. Others use biological parameter in defining it, while others use the chronological, historical, economic, psychological, political and social parameters in defining who an adult is. One may ask “what then can be said about the concept of an adult”? Bown (1979) sees an adult as one who has achieved full physical development and is expected to have the right to participate as a responsible homemaker, worker and member of a society. As a matter of



fact Adult is a responsible and mature person. An adult is, also by law, someone who is responsible for his actions and for the consequences of his behaviours. Being an adult is ideally being able to think and consider the effects that what you do has on you and on the others. Then, it can be argued if this is still what we see, but this is still ideally what it should be. (Roberto, as cited in Maurizio, Filippo, & Ilaria (2017) Education cannot afford to be neglected in every society of the world, for the reason that adults are the people affecting the GDP in Nigeria most households depend and their parents to live. Therefore, education for adult should be the one to cater for their needs, interest and wants.

Concept of Non-Formal Education

Non-formal type of education is a provision for augmenting what adult missed with regard to education earlier. It is also a type of education that has to do with vocational skills for earning a living. To understanding in a specific context Non-formal education is any organized, systematic educational process or activity carried out outside the framework of the formal education system (Shirima, 2021, Sharma, & Choudhary, 2015). It is well noted that non-formal type of education system is consciously aimed at meeting specific learning needs of particular groups of children, youths or adults in a community. It includes various kinds of educational activities such as agricultural extension, skills training, health and family planning, educational work among the youth and women and functional literacy. Bagudo and Yusuf (2019) described non-formal education as an intervention into the ordinary business of life an intervention whose immediate goal is changing, knowledge, attitude, behaviour, skill or competence. This understanding portrays non-formal education as a multi-purpose educational programme. Non formal type of Education as defined by UNESCO (2006) is "any organized and sustained activity that does not correspond exactly to the definition of formal education. It could therefore take place both within and outside educational institutions and cater for persons of all ages. Depending on the country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life skills, work skills, and general culture. The programmes do not necessarily follow the 'ladder' system (Formal Education), and may have different duration and may or may not confer certification of the learning achieved."

However, since Non-Formal Education is for the essence to meet the all categories of adult interest is also viewed as all learning processes, activities or programmes, intended to meet the needs of various individuals considered by society as adults, including out of school youths forced by circumstances to play the roles normally played by adults. Therefore, Non-formal education according to Federal Republic of Nigeria (2013) is education designed to encourage all forms of functional education given to youths and adults outside the formal school system such as functional literacy, remedial and vocational education. But To Ukeje & Aisikuin Ariya et al (2015) as cited in Dennis, Esseniette, & Obot (2019) describe that adult and Non-formal education goes beyond literacy and includes all forms of training outside the formal school system, such as apprenticeship system in Mechanics, bicycle repairing and

carpentry. In other word, Okedara & Bownin Ihejirika (2013) as cited in Dennis, Esseniette, & Obot (2019) viewed Adult and Non-formal education as the rubric of education that covers training and instructions outside the formal education system and ranges from individualized apprenticeship to nationwide literacy. It may be vocational, as in the case of craft training centres in Nigeria designed to provide employment opportunities for young school leavers and for other unemployed persons.

More so, it was observed that the great importance of non-formal was discuss by Coombs & Ahmed (1978) They defines, non-formal education to include , for example, agricultural extension and farm training programmes, adult literacy programmes, occupational skill training given outside the formal system of education youths clubs with substantial education purposes, and various community programmes of instruction in health, nutrition, family planning, cooperatives and the like. Alkali & Bakori (2015) explain that nonformal education as any organized systematic educational activity carried on outside the framework of formal system to provide selected types of learning to particular sub-groups in the population, adults as well as children. This type of education give ample opportunity of it beneficiaries in meeting their needs, overcoming their shortcomings, meeting their dreams and achieving their desires.

Concept of Street Children

Every child in Nigeria has right to be educated irrespective of its tribe, religion, and ethnicity. According to Daniel (2016) A right in its general sense is either the liberty (protected by law) of acting or abstaining from acting in a certain manner, or the power (enforced by law of compelling a specific person to do or to abstain from doing particular thing. The rights of children are well documented in the United Nations Convention of the Rights of child 1980. The Rights are many and fundamentally a child has the right to be alive. The author further clarified that Child rights form an integral part of human rights and therefore every child is entitled to civil, economic, social, and cultural rights. What children do not possess are institutionalized political rights. Civil rights of children include the right to a name and nationality, and protection from torture and ill-treatment, along with special rules pertaining to their right to not be deprived of liberty or separated from a parent. Economic rights include the right to benefit from social security, the right to an adequate standard of living to ensure proper development, and protection from exploitation at work. Social rights of children include the right to the highest attainable standard of health and access to medical services, the right to education, the right to special care for disabled children, protection from sexual exploitation and abuse, and the right to adoption. Cultural rights include full participation in creative and cultural activities.

In attempt to describe who are street children the concept has different connotation, understanding, cultural differences, traditional believes and circumstances. This could be understood in the word of Moura (2002) who analyzed the media and literature on these children and found that the use of the term "street children" is predominant in Latin America,



Asia, Africa, and Eastern Europe, while the term “homeless children” is used in North America and Western Europe. To put it differently Dabir and Athale (2011) stress that the United Nations has provided a broad definition: “those for whom the street (in the widest sense of the word, that is unoccupied dwellings, wasteland, etc.), more than their family has become their real home, a situation in which there is no protection, supervision or direction from responsible adults.” From these discussion it can be deduce that street children concept is common to every nation or country, the only differences is the perspective and believe have based on difference in culture and believes. In the case of Nigeria as what term to be street children ordinary we should not have based on our abundance resources if not because of corruption and leadership. Due to that led to parent and community members abundant their children in the street begging, doing hard labour, scavenge and others. For cultural reasons parent abundant their responsibilities as parent send them to almajiri schools without proper care and provision of their basic needs left it with their Malam of which they couldn't do. As such the children engage into street looking for what to eat and possible way to survive. To reaffirm these statement Adewale & Afolabi, (2013) described that street children are common eyesore in major cities across the world but the problem is more prominent and rampant in developing and underdeveloped nations “street children” challenge has gradually become an index capable of being used to measure the level of development in nations across the globe. In other words, there are more “street children” in poor, underdeveloped and developing countries whereas, the sight and population of street children in developed countries are limited and under some relative control as a result of the citizens' welfare system of developed nations which at all times cater for and give attention and support to such children and their parents. Even though Nigeria is one of the growing nation in terms of population this constituted high number of street children. Okuwa (2008) as cited in Babatunde (2013) observed that despite that we are rich in natural resources, Nigerian has experienced rapid population growth and uneven economic development, resulting mainly in increasing poverty rate that has outpaced the Nigerian government’s ability to provide adequate health, education and social services to their teeming population of her citizens.

Causes of Street Children

As it was observed from the definition giving to who are street children therefore, many more reasons could be identified as what cause a child been in street. Family status differ like wise setting up of family could also be different in term of upbringing, status that has to due with financial capacity, family background from both mother and father, home training and many more. Culture also served as important factor to consider when identifying causes of street children, because some culture varies with one another in term of believes, norms and values. According to Eni (2021). Identify the followings as the causes of street children:

A Dysfunctional family a child in a dysfunctional home is neglected and or abused, members of this family are likely to be aggressive and violent, this family is usually plagued with

drug and or alcohol dependency and mental illness. A child in this family is likely to run away to find shelter on the streets.

Culture in Northern Nigeria, Children between the ages of 4 or 5 sometimes younger are taken to a traditional Islamic school called tsangaya. They are sent there by their parents who live far away, when their lessons are over, they are told to walk the streets to beg for food or money, these children are called Almajiri. Begging for alms is a part of the Almajiri culture, it is seen as a religious duty to give to an Almajiri (Oduah, 2016) as cited in (Eni 2021). These children are sometimes sent to cities in the west to continue the culture, here they are accompanied by adults to whom profits of the day are given.

Domestic Violence Parents are not the only members of a family affected by domestic violence. Exposure of a child to domestic violence is likely to damage the child’s emotional and mental health, in some cases the abuse by the initiating parent extends to the child. In hopes of mitigating the internal turmoil or avoid being abused children in this situation will run to the streets.

Poverty This is the root cause of children working and living on the streets, some work on the streets to supplement their household income, others to fend for themselves or take care of siblings. A 15yr old Cameroonian boy from a polygamous home ran away from home after his mother got sick and could no longer go to the farm, he had no one to pay his school fees and they could not afford a meal, he had to leave home to look for opportunities to survive. (Cumber, Tsoka-Gwegweni and Kanjo Cumber, 2017) as cited in (Eni 2021).

Urban Migration Children from poor homes in rural areas move to urban areas in search of better opportunities and if they have nowhere to stay, they are likely to end up living on the streets. Two boys aged 12 and 13 years old who have been friends for more than a year on the streets, were forced to move to the urban area because of better financial prospects. (Cumber, Tsoka-Gwegweni and Kanjo Cumber, 2017) as cited in (Eni 2021).

Displaced by War due to the insurgency by terrorist groups in certain areas of the Northern part of Nigeria, many families have been displaced, children are running away from destroyed communities to the city streets to seek shelter. (Oduah, 2016) as cited in (Eni 2021).

ILL Health of Parents As a result of poverty and lack of adequate medical care, most parents in rural areas when sick are unable to care for their child, this initiates the movement of the child to the streets for better prospects. A 17yr old girl who used to live happily with her parents had to move to the streets after her parents died and she had no one to take care of her. Another 16 year old boy from a family of 9 said his farther, a construction worker had an accident and was left unable to work, the parents couldn’t provide for him and his siblings, they all dropped out, he started spending late nights with his friends on the street before making a full transition. (Cumber, Tsoka-Gwegweni and Kanjo Cumber, 2017) as cited in (Eni 2021).



However, what identify as causes of street children there is no doubt is happening within Nigerian country most especially in the northern part. Commonly majority of the northerners specifically in rural areas thing like that happened and even in some part of the cities. You found a situation in a family with a number of children but almost everyone has different mother in which it get to a point the children are the one taken care of themselves. The most basic and the father responsibilities are left with other and the society cannot do anything about it.

Types of Street Children and their Common Characteristics

Street children went to street for certain reasons and that gave the types of those children. According WHO () outline the street based on the following:

A 'child of the streets. Having no home but the streets. The family may have abandoned him or her or may have no family members left alive. Such a child has to struggle for survival and might move from friend to friend, or live in shelters such as abandoned buildings.

A child 'on the street. Visiting his or her family regularly. The child might even return every night to sleep at home, but spends most days and some nights on the street because of poverty, overcrowding, sexual or physical abuse at home.

A part of a street family. Some children live on the sidewalks or city squares with the rest of their families. Families displaced due to poverty, natural disasters, or wars may be forced to live on the streets. They move their possessions from place to place when necessary. Often the children in these 'street families' work on the streets with other members of their families.

In institutionalized care. Having come from a situation of homelessness and at risk of returning to a homeless existence. Critically, street children are describe with their behaviour, attitudes and activities describe their types. Further, more the type above also describe them based on their activities and the way they survive. The author also identified the common characteristics of the street children as follows:

To earn money for themselves and support their families. Street children work on the streets to earn money for themselves. Some children need to work to support their families.

To find shelter. In overcrowded households, children may decide to leave home to make room for younger siblings and elderly family members. Others are on the streets because they do not have an alternative

To escape from family problems including rejection. Many children feel that living on the streets is better than coping with problems in their homes. These problems can include conflicts with parents, physical or sexual abuse or neglect (e.g. an abandoned disabled child)

To escape from work demands in the home. In many cultures, children are expected to participate in routine family tasks. At times the demands on children may be more than they can take.

To escape from a children's institution. Street children may feel that children's homes are 'like prisons'. They cannot adjust to rules after experiencing the freedom of the streets.

These children are children like any other child who has parent but the only differences some of the parents take off their responsibilities but some left it in the hand of the society whereby they happened to be abundant mistakenly and fall into the hands of bad eggs. These common characteristics identified with street children are exactly their situation. Even though there are children among them whose parents are a live but not even care where they are?, what condition are they in?, and how do they survive?. It is common in northern part of Nigeria a child in his father's house was neglected being his mother not in the house or died. While sometimes the mother is there but cannot do anything to her children just because she is powerless in the house. Similarly, this is why they found themselves in street in order to survive. For instance, Girmachew (2016) as cited in Bayissa (2021) noted that street children use different mechanisms to cope with various challenges they face while working or/and residing on streets. Street children survive through undertaking a wide variety of activities, which mainly take place in the informal sector; they usually do not have a fixed career. In other words, they jump over opportunities based on the nature of the reward or the benefit they draw or do it in combination. Street children also choose a place to spend the night based on its social, security and economic advantages Bhukuth & Jerome (2015) as cited in Bayissa (2021)

Non-formal Education Needs for Street Children

These type of children required attention from the government, NGOs, Communities and Individual Philanthropist for them to survive like any other child in the country. It was observed that there were no accurate data on the number of street children is only by estimation. It was reported that Nigeria have significant number of street children when compare with other countries. For instance, Babatunde (2013) which reported that sociologists and development analysts estimate of between 100 million in UNICEF's estimate of 1989 and a projection of 150million "street children" by various authorities between year 2004 and 2006, statistically sounds realistic considering the worsening level of poverty and deteriorating living standards in developing countries, and various effects of war and disasters across the world, particularly in developing countries in the last 2 decades, which further worsened the fragile economics of family units. Accordingly to Owobu et al. (2020), as cited in Yusuf & Tsagem (2022) to support the view describe that street children in Edo state of Nigeria were 9 per 10,000 adolescent population of the State. In the street of Lagos alone, Volunteer Work Africa (2022) as reported by the authors put it differently that the estimated population of street children at 100,000 for reasons such as poverty, parents' separation or death, parents' unemployment, illiteracy or truancy and illtreatment at home. These children are vulnerable to all forms of abuse including sexual assaults, intimidation, molestation and child labour, and ritualism among others.

Categories of this children are either marginalized or underprivileged to take the advantage of basic needs such as: education, health care services, provision of good food and



shelter. Despite that the Nigerian government in conjunction with international development agencies and national one tried as much to provide these services to them even though there number are not known by the authority concerns. The provision of non-formal type of education is for all categories in order to meet up with what one missed earlier. For instance, Koul (2011) understand that non-formal education like any other organized systematic educational activity provides selective type of learning to particular groups of learners (both adults as well as children) outside the framework of the formal school system. It is a flexible and organized learning activity which takes place at the learners' place, pace and time. It is also need-oriented and interest based. It provides a second chance to dropouts and enables the under-privileged sections of society to acquire relevant knowledge and skills. The non-formal type of education that requires by the street children range from basic literacy skills, post literacy those who are dropout, vocational education and functional literacy skills among others. Farrant (2002) sees non-formal type education is the one that consciously aimed at meeting specific learning needs of particular groups of children, youths or adults in a community. It includes various kinds of educational activities such as agricultural extension, skills training, health and family planning, educational work among the youth and women and functional literacy.

With regard to the understanding by who is street children and their common phenomenon they require the following non-formal education to survive:

Basic Literacy: it is the ability of an individual adult (man or woman) to read, write and communicate in known language(s), as well as the ability to do basic mathematical computations far beyond basic literacy level. In simple terms, literacy should be seen as a tool that can equip the individual to improve himself intellectually, to empower himself economically, and to make himself socially and politically relevant. Therefore when one is attain to this is to reduce poverty, illiteracy and gender inequality can be drastically also reduced to the barest minimum.

Life Skills: life skills are attitude or behaviour on which if one is exposed into is expected to notice a significant changes in unwanted behaviour or attitude that he engaged into. For street children who are identified with one or two types of behaviour that are completely out from the accepted manners within communities or societies. Therefore, street children needs life skills training as it was describe by World Health Organization (WHO, 2003; WHO, 1994), Life Skills Education includes the promotion of three categories of life skills: communication and interpersonal skills, decision-making and critical thinking skills, coping and self-management skills. To support this Ramesht & Farshad. (2004) in their study confirmed the effectiveness of like skills training in increasing mental and physical health, pro-social behavior and decreasing in behavioral, social problems and self-destructive behaviors. Not only that Vranda & Rao (2011) went ahead to conduct a study which revealed that life skills training enhanced their psycho-social Competencies. Similarly, the study of Puspakumarag (2013) indicates that life skills training was effective in preventing a wide range of problems such as substance abuse, teenage pregnancies,

violence Bullying & to promote self-confidence and selfesteem among the adolescents.

Post-Literacy Programme: It might be possible among the street children there are dropout whose the level of their literacy skills is not that enough to depend upon. In this case they can enroll into post-literacy to avoid enlaps into illiteracy. UNESCO, (2000). Argue that Post-literacy enables newly literate individuals to retain, improve and apply their basic knowledge, skills and attitudes for satisfaction of their needs and to permit them to continue through a self-directed process of improvement of quality of life.

Vocational Skills: Poverty is a serious identity which reduce family to a line of not having basic to attained. This is one of the most disturbing aspect to these street children. In order to end this a vocational skills of their interest should be organized for them. According to Oni (2007) vocational skills as one of the mechanism that are acquired through training within the environment where one lives without necessarily attained classroom. But to Ben (2010) postulated that training of these skills could be in one or more of these areas: tailoring, carpentry, weaving (cloths, basket, mats), designing and making of bags, cane chairs, poultry keeping, agriculture, gardening, masonry, cookery and sewing. Once one received such training would be in future self-reliance and self-developed earn his living and be independence.

Health Literacy Skills. It is obvious that street children found themselves in serious mess in terms of health services despite they have right to be taken care health. Researchers were conducted on health related issues of street children Samuel & Joyce (2016) found that: health growth and nutritional disorders, physical injuries, parasitic and other community-acquired infectious diseases, sexual and reproductive health disorders, violence and sexual abuse, substance use and abuse, mental health problems access to health care services and transactional sex practice and its consequences. To adress this issues non-formal education is in better position since it was design to cater for individual needs. Therefore, health education programme should be organize for them and equipped with first aid treatment guide lines and procedure when got ill.

Suggestion

The paper is suggesting based on literature and studies conducted by different researchers on street children phenomenon most especially in northern part of the country. The followings are some of the suggestion provided by the paper:

- Parents, guardians and members of the society should take their responsibilities serious in order to limit the level of street children activities within their communities.
- Government agencies, departments of social welfare in local government should intensify effort in providing what is require for such type of children since the have right as a citizen to provide with services as any other child in the country.
- Non Governmental Organizations (NGOs) did their based in training teeming population of youth in different life aspect. The paper suggesting for them to come up with more programme that is mainly targeting this type of children for



self-reliance, equipped them basic skills of life expectancy like any other children with parents.

d. Individual philanthropist, community elders and leaders should come together ensure each child in their community have adequate care, check parent attitude toward their children, design strategic plan on how to track every families attitude within the community.

CONCLUSION

Street child phenomenon is understood to some extents is negligence from the parents by shown away from basic responsibilities that shoulder on them. It is very pathetic when see these type of children roaming about street struggle for survival in a very harsh condition. These type of children were into different categories of street children and on street children of which indicated to you how serious some of them are and the kind of condition fund themselves in. The citizen the government concerns, individual and communities members are sometimes neglect such type of children. Coming to realize who they are, what do they want, and their nature in life it become mandatory to every one to put hands on-deck to provide their required services. Therefore, non-formal education is a provision to cater for everyone needs in terms of basic literacy skills, post-basic literacy, vocational education and health services in order to make them fill among like any other citizens.

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CONSIDERATIONS ON THE COMPOSITION ASPECTS OF ANTHROPNYMS IN THE EPICS OF KHOREZM

Kurbanova Bibijon Kuranbayevna
Independent Researcher of Urgench State University

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ABSTRACT

This article reflects on the structural aspects of the names formed on the basis of the absorption layer units used in the language of epics widespread in the Khorezm region. In particular, it is shown that some names used in the epic language have a compound composition from a diachronic point of view, even if they are considered as a synchrony-simple holistic unit.

KEY WORDS: Choresmus, dastan, dialectism, vocabulary, grammatical dialectism, comparative analysis.

DIE ANEIGNUNG IN DEN KHWAREZMISCHEN EPEN BETRIFFT DIE STRUKTURELLEN ASPEKTE VON ANTHROPNYMEN

Kurbanova Bibijon Kuranbayevna
Staatliche Universität Urgentsch unabhängige Forscherin

Anmerkung

Dieser Artikel reflektiert die strukturellen Aspekte der Namen, die auf der Grundlage der Absorptionsschichteinheiten gebildet werden, die in der Sprache der in der Region Choresm verbreiteten Epen verwendet werden. Insbesondere wird gezeigt, dass einige in der Epensprache verwendete Namen aus diachroner Sicht eine zusammengesetzte Zusammensetzung aufweisen, auch wenn sie als Synchronie-einfache ganzheitliche Einheit betrachtet werden.

Schlüsselwörter: Choresmus, Dastan, Dialektismus, Vokabular, grammatikalischer Dialektismus, vergleichende Analyse.

Durch die Erforschung der Sprache der Epen wird die Möglichkeit geschaffen, die alten Wurzeln der modernen usbekischen Sprache, die Stadien der historischen Entwicklung sowie die Fragen der Herkunft und semantischen Entwicklung vieler Wörter und Phrasen zu identifizieren. Wenn man über das Lexikon der Epen nachdenkt, kann man seine dialektallexikalische Allgemeinheit von Menschen beobachten, die hauptsächlich in dem Gebiet leben, in dem das Epos verbreitet ist. Bei der Untersuchung bestimmter regionaler Dialekte und Dialekte kann man zunächst sprichwörtliche Namen als auffällige Einheiten anführen.

Die Eigennamen sind ein wichtiger sprachlicher, kultureller und spiritueller Reichtum unseres Volkes, der seit vielen Jahrhunderten geschaffen wurde. Namen verkörpern die wichtigen Beobachtungen, Erfahrungen, Weltanschauungen und Überzeugungen von Menschen von der Antike bis heute. Unsere Leute haben reiche Erfahrung in der Benennung von Orten gesammelt, Einzelpersonen seit der

Antike, kein einziger Name wurde ohne Begründung platziert. Diese Situation wird erneut deutlich, wenn wir soziohistorische, historisch-geografische Informationen über die Bedeutungen von Namen, die Prinzipien und Gründe für die Wahl von Namen, die Geschichte ihrer Herkunft analysieren. *“Zero, Bugungi globallashuv davrida har bir xalq, har qaysi mustaqil davlat o‘z milliy manfaatlarini ta‘minlash, bu borada avvalo o‘z madaniyatini, azaliy qadriyatlarini, ona tilini asrab-avaylash va rivojlantirish masalasiga ustuvor ahamiyat qaratishi tabiiydir [1]”.*

Wenn das Namenssystem der in der Sprache der khwarezmischen Epen gefundenen Person aus der Sicht der lexikalischen Schichten überprüft wird, sehen wir, dass ein großer Teil von ihnen auf der Grundlage der assimilativen Schichteinheiten gebildet wird. Es sollte gesagt werden, dass wir auch auf Anthroponyme stoßen, die auf der Grundlage ihrer eigenen Schichteinheiten entstehen, wenn auch natürlich quantitativ. Es ist klar, dass die Funktion dieser Namen aus



historisch-etymologischer Sicht, ihre Untersuchung in Bezug auf den Zeitraum ihrer Verwendung (archaisiert oder nicht archaisiert) wiederum interessante und wichtige Informationen liefert.

Wenn man den strukturellen Aspekten der Namen der Person Beachtung schenkt, die aus den Texten der Serien "Oshiqnoma" und "Göroğli" stammen, stellt sich heraus, dass die überwiegende Mehrheit von ihnen Namen sind, die aus zwei oder mehr Komponenten zusammengestellt wurden. Es ist zu erkennen, dass diese Situation in Bezug auf den Punkt onomastischer Einheiten bei der strukturellen Aufteilung lexikalischer Verbindungen nur sehr schleppend untersucht wurde.

Wenn bestimmte Aspekte von Substantiven in nomologischen Quellen zitiert werden, wird ihre gravierende Abgrenzung zum lexikalischen Singular erwähnt, aber die Tatsache, dass Substantive auch aus appellativ regelmäßigen Wörtern bestehen, legt nahe, dass sie bis zu einem gewissen Grad auch lexikalisch-grammatikalische Merkmale beibehalten. Daher ist es schwer zu leugnen, dass Namen wiederum in Bestandteile zerlegt werden können, dass sie auch etymologisch auf ihre Eigenschaften wie Zugehörigkeit oder Zugehörigkeit zur angrenzenden Schicht analysiert werden können und dass diese Analyse sehr wichtige Informationen für unsere Nomologie liefert.

Vor diesem Hintergrund scheint es, dass die Absorption in den khwarezmischen Epen untersucht werden kann, indem Anthroponyme nach Art von Substantiven mit einfacher Zusammensetzung und zusammengesetzter Zusammensetzung dichotomisiert werden. In dieser Hinsicht gibt es auch einige Unstimmigkeiten. Beispielsweise bleiben Schlussfolgerungen aus dem Lexikon der Epen, bestimmte Namen als einfach oder mitkomponiert zu behandeln, davon abhängig, ob sie in Bezug auf diachronen oder synchronen Punkt bewertet werden.

Im Lexikon der Epen gibt es solche Namen, die, wenn sie aufgrund der Tatsache, dass sie heute untrennbar miteinander verbunden sind, als einfacher Name betrachtet werden, aus historischer Sicht in die zusammengesetzten oder zusammengesetzten Namen aufgenommen werden können: zum Beispiel **Abdullah, Abdukadir, Bahouddin, Gulandom, Zarafshan, Navruz, Shovalad, Shikhotoy, Eshmat, Hamro** usw.

Es stellt sich als falsch heraus, dass diese Namen aus diachroner (historischer) Sicht als einfacher komponiert behandelt werden. Zum Beispiel besteht die onomastische Einheit von Abdullah, die im Epos "Die Geburt des "Go'roglu" als Einheit arabischen Ursprungs zu finden ist, aus zwei Teilen – "abd" (Sklave, Banda) und "ullo" (Allah), aber wir halten es für wünschenswert, ähnliche Namen als einfachen Namen in Bezug auf den Punkt der usbekischen Sprache zu betrachten. Heute ist es auch selbstverständlich, dass nicht viele Menschen bemerken, dass solche Namen aus mehreren Teilen bestehen.

Ein weiterer Grund für die Einzigartigkeit der Zusammensetzung ähnlicher Namen, die aus mehreren Teilen

besteht, lässt sich damit erklären, dass es sich im Prinzip um geliehene Wörter handelt. Aufgrund der Tatsache, dass nicht alle Menschen, die diese Wörter in der Sprache verwenden, die Bedeutung fremder Einheiten verstehen können, können Namen in eine ganzheitliche Form kommen.

Lassen Sie uns zum Beispiel in der folgenden Passage auf das Anthroponym Mullo Eshmat achten, das dem Epos "Asik Alband" entnommen ist. Die Tatsache, dass das Pferd von Eshmat, Atakli, auch aus Diachron (historisch) "esh" (Begleiter, Begleiter) und "mat" (Muhammad) oder Teilen besteht, ist für Experten ein bestimmtes Phänomen. Nehmen Sie auch das Anthroponym Mamatsho aus dem Epos "Sayod und Hamro". Diese Assimilation besteht aus den Anthroponymen Mamat- und Sho-Teilen, die auf der Grundlage von Schichteinheiten gebildet werden, der erste Teil ist die Ausspracheform des Namens Muhammad in regionalen Dialekten, und der zweite Teil entstand auf der Grundlage des Elements der Assimilation im Sinne des Königs, des Königs. Daher werden in den Texten der khwarezmischen Epen verschiedene Varianten dieses Anthroponyms wie Mamatsho // Shomamat // Mamatkhan beobachtet.

Dennoch bilden in den khwarezmischen Epen auch die assimilativen Anthroponyme, die ohne Diskussion als einfacher Inhalt betrachtet werden können, Anchagina: **Ali, Amud, Ashur, Aqcha, Ayub, Bilol, Bonu, Ganja, Zuhra, Zebo, Zaynab, Idris, Isa** usw.

Ein großer Teil der Internalisierungsanthroponyme, die im Lexikon unserer Epen zu finden sind, sind Namen, die aus mehr als einer Komponente zusammengestellt wurden, wie oben erwähnt. Darunter, **Ahmad Mirzo, Bibizahro, Bibiniyoz, Bibioysha, Bo'zo'g'lon, Guljahon, Guljamila, Gulchehra, Dastagul...** usw. Es gibt auch Besonderheiten von Namen, die aus mehr als einem Teil bestehen. Zum Beispiel werden in einigen von ihnen Teile orthographisch auseinander geschrieben, während Teile von einigen mit Suffix geschrieben werden. Auch diesbezüglich wurde kein bekannter Stopp vorgenommen.

Im Lexikon der khwarezmischen Epen gibt es einige mehrteilige Namen, die unserer Meinung nach korrekter wären, sie in die Kategorie der Substantive mit komplexer Zusammensetzung aufzunehmen. Beispielsweise, **Bo'zo'g'lonxon, Mirg'azdali, Said Muhammad Mohro'y, Shayx Sharof eshon, Shayx Muxtor vali** usw. Es ist auch erwähnenswert, dass aus den Beobachtungen bekannt ist, dass solche Schlussfolgerungen nicht nur für Anthroponyme, sondern auch für andere Nomentypen mit mutiger Schritt angewendet werden können.

Anstelle der Schlussfolgerung kann gesagt werden, dass die Sammlung und Analyse von Anthroponymen, die auf der Grundlage angepasster Schichteinheiten entstehen, die aus dem Lexikon der khwarezmischen Epen adaptiert wurden, die Überprüfung der Struktur, Zusammensetzung von Namen solcher Typen und die Erforschung lexikalisch-semantischer



Merkmale für die usbekische Linguistik noch interessanter und informativer sind.

VERWENDETE LITERATUR

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AN EVALUATION OF RURAL HOUSING SCHEMES IN KARNATAKA: A CASE STUDY OF CHAMARAJANAGARA DISTRICT

Madan, C. S.¹, Dr. Ramachandra Murthy, K.², Dr. S.M. Basavaraju³

¹Research Scholar, DoS in Economics and Cooperation, Manasagangotri, University of Mysore, Mysuru - 570006, Karnataka, India.

²Lecturer of Economics, University Evening College, University of Mysore, Mysuru - 570006, Karnataka, India.

³Associate Professor, DoS in Economics and Cooperation, Manasagangotri, University of Mysore, Mysuru - 570006, Karnataka, India.

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ABSTRACT

Housing is a basic and most important requirement for every citizen. Housing not only provides social security to human beings but also provides status in the society. The housing period provided shelter and evolved into employment opportunities and not only in development of places but also as an integral part of the period. The study identified that the Rural Housing schemes status in Karnataka, the Socio-economic Status of Housing Schemes beneficiaries and housing conditions of the housing schemes in study area. During 2017-18, 200 houses have been approved, out of which 32 are incomplete, 49 have been completed, 68 under processing, 82 number of houses has been cancelled. Similarly, in the Ambedkar Housing Scheme aims to build 44 houses. Totally 36 houses have been approved, of which 09 are incomplete, 13 have been completed, 10 under processing, 12 number of houses has been cancelled. Finally PMGAY Housing Scheme aims to build 58 houses, out of which 47 houses have been approved, 11 are incomplete, 26 have been completed, and 10 under processing. Considering the above points, most of the approved houses have been canceled due to several reasons.

KEYWORDS: Housing, Rural, Food, shelter, Household, Socio-economic, Development.

INTRODUCTION

India has been trying to its level best to provide basic necessities like Food, Clothing and Shelter. Through the country is able to take care of the first two basic problems it is not yet provided the shelter to a greater extent. Housing also plays a very important role for the families to lead life with respect, happiness, health and efficiency (Shivanna, T., & Kadam, R. N). We find in The Article 21 of the Constitution of our country that housing is a fundamental right to human life.

The article 21 of the Constitution of our country has declared that Housing is a fundamental right to human Life (Kumar, K. (2019). According to Lal Shankar, "Food, shelter and clothing are the basic necessities of life. Having these three elements increase the physical efficiency and productivity of human life. According to Scott, Munn, Zarif, "Housing is a key component of human resource development, and its priority is to provide the government with immediate access to those in need. Moreover, even 75 years after India's independence, we still see this problem. According to the 2011 census Seventy-five percent still live in rural areas, with 43 million families homeless. Despite the problems, the Government of India aims to provide housing for every family by 2022.

Importance of Housing

A house serves the basic needs of poor households without which it is difficult to survive (Gangadhara Reddy and Mamatha 2015). It provides them both physical and mental strength and a psychological base on which they can fall back while accessing other basic needs such as food and clothing. For a normal citizen, owning a house provides significant economic security and status in the society. For a poor household, a house constitutes an asset, which can be offered as a collateral loan during difficult periods or for children's education and marriage and also for having treatment in case of illness. A house also protects a poor household from the vagaries of nature, in the absence of which they are forced to take to streets and live in the open. In short, it can be said that 'a house is part and parcel of man'. A house can be small, related to the number of family members. The families in rural areas live without proper space for movement, no space for privacy and no space for children to play, etc. Due to insufficient space, the incidence of contracting diseases increases; infection spreads quickly into the poor households. Cooking and living in the same space make tiny huts get polluted easily and affects family health due to lack of proper ventilation and space. Owing to lack of space, in tiny huts, livestock also lives with a poor family often creating problems of sanitation and hygiene. The present study focused on the evaluation of the Housing schemes status in Karnataka and



Socio-economic Status of Housing Schemes beneficiaries in Study area.

OBJECTIVES

Following are the major objectives of the present research work

- To Study the Rural Housing schemes status in Karnataka.
- To Analysis of the Socio-economic Status of Housing Schemes beneficiaries in Study area.
- To Evaluation of the housing conditions of the housing schemes in study area.

METHODOLOGY

The planned study is based on both primary and secondary data. Primary and secondary data will be collected to test the various hypotheses implicit in the objectives listed above. To examine the trends and patterns of housing schemes in Karnataka, the secondary will be collected from various sources like Economic Survey of Karnataka, Department of housing and other reports and documents published various government agencies.

Rural Housing schemes in Karnataka

Table-1: Details of Houses Constructed and House Sites distributed under different Rural Housing Schemes

Year	Rural Ashraya/ Basava Vasathi Yojane	Rural Ambedkar	Devraj Urs Housing Scheme	Dr. B.R. Ambedkar Nivasa Yojane	IAY/ PMAY (G)	Total	House Sites Rural
2000-13	1551165	156380	-	-	637125	2344670	173494
2013-14	207594	4101	-	-	98815	310510	4279
2014-15	185073	3313	-	-	104098	292484	8140
2015-16	113375	2704	4739	-	100514	221332	8021
2016-17	123535	0	14183	12813	96030	246561	6202
2017-18	127751	220	15634	95660	64690	303955	9047
2018-19	147081	44	6783	58883	56136	268927	3002
2019-20	64179	18	2782	24994	14682	106655	2537
2020-21	61651	0	2896	27014	11536	103097	2217
2021-22	56724	0	4800	29670	13389	104583	1829
2022-23	85206	0	10979	35407	17577	149169	10110
2023-24**	59438	0	5215	22143	4320	91116	688
Total	2782772	166780	68011	306584	1218912	4543059	229566

Source: Economic Survey of Karnataka 2023-24

Note: ** Revised data

Table 1 shows the Details of Houses Constructed and House Sites distributed under different Rural Housing Schemes in Karnataka. As per the table, 2344670 houses constructed during the period of 2000-01 to 2013 and 149166 houses constructed from the Rural Ashraya/ Basava Vasathi Yojane, Rural Ambedkar, Devraj Urs Housing Scheme, IAY/ PMAY (G) Dr. B.R. Ambedkar Nivasa Yojane schemes in

Karnataka state during the period of 2022-23. The data clear that the government spent the amount for the housing schemes in rural areas. During the last 5 years, the Government has spent a total of Rs.31.09 crores under Rural Houses Sites programme. The details of scheme wise houses completed and sites distributed in rural areas.

RESULTS AND DISCUSSION

Table - 2: Type of House Across Various Social Groups .

Cast	Sheet house		Tile house		Terrace house		Total	
SC and ST	14	70.0%	4	20.0%	2	10.0%	20	100%
OBC	15	75.0%	2	10.0%	3	15.0%	20	100%
GM	03	30.0%	5	50.0%	2	20.0%	10	100%
Total	32	64.0%	11	22.0%	7	14.0%	50	100%

Source: Field Study

Table 2 illustrated that, the housing condition in the study area. Here we can mainly classify three types of housing; 1.Terrace house (first-class house) 2.Tile (Second class house) 3.Sheet houses (Third class house). Out of 20 members in SC

and ST, 14 members have built third-grade, 4 member's second-grade and 2 members' first-class houses. Similarly, 15 members out of 20 people under the OBC category have built third class houses, 2 members have constructed second class



and 3 members built sheet houses, while 3 out of 10 people in GM have built third grade houses, 2 member second grade and 5 first grade houses respectively. This includes those who are

financially marginalized 1st class and 2nd class houses and financially disadvantaged third class houses.

Table-3: Gender of the Respondents

Gender	Frequency	Percentage
Male	36	72
Female	14	28
Total	50	100

Source: Field Survey

Table 3 reveals that the gender of the respondents in the study area. 72.0 percent of the respondents were men and 28 percent were women. Since most of the men are responsible for the household, they are seen as overcrowded. I have collected

primary data using a total of 50 families of the top 50 members, 20 members belong to SC and ST, 20 members are OBC and 10 members are from GM category.

Table - 4: Occupation of the Beneficiaries across Various Social Groups.

Categories	Agriculture		Private		Other		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
SC & ST	08	40.0%	05	25.0%	07	35.0%	20	100%
OBC	07	35.0%	03	15.0%	10	50.0%	20	100%
GM	05	50.0%	02	20.0%	03	30.0%	10	100%
Total	20	40.0%	10	20.0%	20	40.0%	50	100%

Source: Field Survey

Table 4 presents the percentage of occupation as total and category wise percentage of occupation out of total number of beneficiaries. As per as table 1.6 is concerned, 40 percent of the total number of beneficiaries are involved in agriculture, 20 percent in the private sector and remaining 40 percent of

them are worked in other sectors. The most importantly almost more than 30 percent of the total beneficiaries are constantly engaged in agriculture and other sectors of the study area. Only less than 30 percent of the total beneficiaries have got engaged in building construction works etc.

Table -5: Monthly Income of the Head of the Household across Various Social Groups

Average monthly income	Frequency (Percentage)	SC&ST (Percentage)	OBC (Percentage)	GM (Percentage)
Below 5000	4 (8%)	2(10%)	1(5%)	1(10%)
5001-12000	6(12%)	3(15%)	2(10%)	1(10%)
12001-16000	20(40%)	7(35%)	9(45%)	4(20%)
16001-20000	13(14%)	6(30%)	5(25%)	2(10%)
above 20001	7(14%)	2(10%)	3(15%)	2(10%)
Total	50(100%)	20(100%)	20(100%)	10(100%)

Source: Field Survey

Note: Figures in Parentheses are in Percentages

Table - 5 Shows that the monthly income of the head of the household Across Various Social Groups in the study area. As per the given table, 8 percent of the respondent's Income are below Rs. 5000. Whereas, 12 percent of the respondents' income is between Rs. 5001-12000. While, 40.0 percent of the respondents' income is Rs. 12001 to 16000, 14 percent of the respondents' income comes under the income group of Rs.

16001 to 20000 and remaining 14 percent of the respondents' income is above Rs. 20001 in the Study area.

It is clearly shows that, the majority of the SC, ST, OBC and Other respondents have income level between 12001-16000. Hence, OBC is in a better Condition in monthly income compared to Other Social Groups in the study area.

Table - 6: Type of Land Owned Across Various Social Groups.

Land Asset	SC and ST		OBC		GM	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Own land	10	60%	15	80%	07	70%
Government land	02	10%	01	00%	01	00%
Act land	06	30%	02	10%	01	10%
Landless	02	10%	02	10%	01	10%

Source: Field Study

Table 6 shows that amongst SC and ST community we have observed that 10 out of 20 family have got own land, 2 family have got government land and 6 family are coming under the

so called "Tiller is the owner of the land" (as per 1970 act) and remaining 2 family have become landless. Similarly, amongst 20 families of the OBC community, 16 family have



got own land, 2 of them are processing the government land and 2 are coming under the above mentioned act. Finally in the General category, 7 out of 10 families have their own land, 1 family has got government land and 1 family is coming

under the so called “Tiller is the owner of the land” (as per 1970 act) act and remaining 1 family become landless.

Table 7: Size of the Land

Land size in Acres	SC and ST	OBC	GM
1 to 2 Acres	6(30%)	5(25%)	1(10%)
3 to 4 Acres	7(35%)	5(25%)	2(20%)
4 to 5 Acres	3(15%)	3(15%)	3(30%)
5 to 6 Acres	2(10%)	5(25%)	3(30%)
Landless Acres	2(10%)	2(10%)	1(10%)
Total	20(100%)	20(100%)	10(100%)

Source: Field Survey

As we know that, In India more than 50 percent of the population depends on agricultural sector. Here also signed of table 7 information about 90.0 percent of the respondents have own agricultural land for their livelihood in the social groups and 10.0 percent of the respondents don't have an agriculture land in the social groups. As per the data, it is revealed that 35.0 percent of the SC and ST respondents have the land

between 3-5 acres. While 25.0 percent of the respondents have the land between 5-6 acres and 30.0 percent of the respondents have own land between 5-6 acres in the study area.

It is clearly reveals that the others and OBC are better condition in land holding compared to SC and ST in the study area

Table -8: Loan Status across Various Social Groups

Average	SC and ST	OBC	GM
No Debt	3(15)	2(10)	2(20)
50000-100000	2(10)	4(20)	1(10)
100000-150000	4(20)	8(40)	4(40)
150000-200000	6(30)	4(20)	2(20)
200000 and above	5(25)	2(10)	1(10)
Total	20(100)	20(100)	10(100)

Source: Field Study

Note: Figures in Parentheses are in Percentages

Table 8 shows that the Caste-wise comparison of the loan status in the Study area. As per the table, more number of 30.0 percent of the SC and ST respondents have taken loan average between 150000 to 200000 from different sources Whereas, 40 percent OBC respondents have taken loan average between 100000 to 150000 and 40 percent of the GM respondents have

taken loan average between 100000 to 150000 in the study area.

It is clear from in the above table that the majority of SC/ST, OBC and GM respondents have taken loan from different sources but more number of the SC/ST respondents are taken loan compare the other social groups in the study area.

Table -9: Ownership of Assets across Various Social Groups.

Category	Mobile	Cycle	Two wheels'	Three wheelers	TV	Jewelry Above 5g	Jewelry Below 5g
SC & ST	20	15	14	00	19	13	07
OBC	20	16	15	06	20	16	04
GM	10	08	07	01	10	09	01
Total	50	39	36	7	49	38	12

Source: Field Survey.

Note: Figures in Parentheses are in Percentages

Table 9 depicts that the Assets of Ownership as shown in the above table, each beneficiary owns at least one mobile phone, one TV, and one bicycle , This includes some bicycles given by government to students. But other assets, such as motorcycles, three-wheelers, car and gold jeweler, are different has been found.

families with less than 5 grams gold and 7 families with fewer or less accessories. In similarly backward classes and other communities have 16 bicycles, 15 motorcycles, 6 three wheelers, 20 TVs and 4 families with less than 5 grams of jeweler and 16 families with more or less jewelry, 8 bicycle, 7 motorcycle, in general category one three wheeler can be found with 10 TVs and 9 family with more than 5 g 1 family with fewer ornaments can be found in this species. By looking at the Overall data we can conclude that some of them have

They are also calculated based on different communities. The Scheduled Caste and Scheduled Tribes family consists of about 1 four-wheeler, 14 motorcycles, 15 bicycles, 19 TVs, 13



got better financial stability than the other families of my study area.

Table - 10: Source wise Borrowings across Various Social Groups.

Category	Friends	Relatives	Money lender	Financial institutions
SC & ST	01(5%)	01(5%)	03(15%)	15(75%)
OBC	02(10%)	01(5%)	10(50%)	07(35%)
GM	01(10%)	01(10%)	02(20%)	06(60%)
Total	4(8%)	3(6%)	15(30%)	28(56%)

Source: Field Survey

Note: Figures in Parentheses are in Percentages

Table 10 Because the government does not provide enough money to beneficiaries, beneficiaries will find money sources to build their own house by borrowing money from financial institutions, money lender, relatives and friends to build houses. It can be seen that most of the families borrowing money from financial institutions and money lenders. **Reasons for borrowing Money**

* Since household size is large (30/40) funds are not sufficient to complete The House.

* The cost of goods and services required to build a house is expensive

* Due to various types of earth or soil

* Because there is one or two working numbers

* Due to the low colony of hired labor

* Religious causes

* And other social causes.

Table -11: Type of Houses across Various Social Groups

Social Groups	Puccha house		Semi Puccha house	
	Frequency	Percentage	Frequency	Percentage
SC & ST	04	20%	16	80%
OBC	04	20%	16	80%
GM	06	60%	04	40%

Source: Field Survey

Table 11 here we can see three types of housing, the first being tile houses, the second being sheets and terraced houses .Out of these houses, terrace houses classified as first-class, tile-built houses are classified as second-class and sheets houses termed as third-class houses. In the OBC and other community 4 families have built puchha house (permanent)

and 16 families have built semi puchha house. Finally amongst the general community 6 families have built puchha house (permanent) and 4 families have built semi puchha house. Those who have got better financial stability built puchha house and those with poor financial situation will built a semi puchha house.

Table-12: Condition of Housing across Various Social Groups.

Housing condition	SC and ST		OBC		Gm	
Good condition	8	40%	9	45%	7	70%
Bad condition	12	60%	11	55%	3	30%

Source: Field Survey

Table 12 As shown in the above table the beneficiaries built houses are classified as good and bad quality houses, sheets built and the houses are said to be unhygienic because there are no high quality rooms. Amongst SC & ST 8 houses have been found to be of good quality and 12 houses of poor quality, while in the case of Cat-1, Cat-2 & OBC have built 9 good and 11 bad houses and finally 7 good and 3 bad houses

are constructed by general community peoples. In the above table, 48 % houses are in good condition and 52% houses are in bad condition. it is clear indication that, those with better financial condition have built good conditioned house whereas those with poor financial situation has not been possible to construct good conditioned houses.

Table 13: Housing Schemes Implement in Dasanuru Grama Panchayath

Schemes	Year	Aim	Sanction	Complete	Incomplete	Processing	Cancelled
Ambedkar Vasathi Scheme	2017-18	44	36	13	09	10	12
Basava Vasathi Scheme	2017-18	232	200	49	33	68	82
Pradhana Manthri gramina Avas Scheme	2017-18	58	47	11	26	10	0
Total	2017-18	334	283	73	68	88	94

Source: Field Survey

Table 13 shows in the various housing schemes reported for the year 2020-21 aiming to construct 232 houses under the Basava housing Scheme. During 2017-18, 200 houses have been approved, out of which 32 are incomplete, 49 have been completed, 68 under processing, 82 number of houses has

been cancelled. Similarly, in the Ambedkar Housing Scheme aims to build 44 houses. Totally 36 houses have been approved, of which 09 are incomplete, 13 have been completed, 10 under processing, 12 number of houses has been cancelled. Finally PMGAY Housing Scheme aims to



build 58 houses ,out of which 47 houses have been approved, 11 are incomplete, 26 have been completed, and 10 under processing . Considering the above points, most of the approved houses have been canceled due to several reasons.

CONCLUSION

A house serves the basic needs of poor households without which it is difficult to survive (Gangadhara Reddy and Mamatha 2015). It provides them both physical and mental strength and a psychological base on which they can fall back while accessing other basic needs such as food and clothing. For a normal citizen, owning a house provides significant economic security and status in the society. For a poor household, a house constitutes an asset, which can be offered as a collateral loan during difficult periods or for children's education and marriage and also for having treatment in case of illness. The study illustrated that during 2017-18, 200 houses have been approved, out of which 32 are incomplete, 49 have been completed, 68 under processing, 82 number of houses has been cancelled. Similarly, in the Ambedkar Housing Scheme aims to build 44 houses. Totally 36 houses have been approved, of which 09 are incomplete, 13 have been completed, 10 under processing, 12 number of houses has been cancelled. Finally PMGAY Housing Scheme aims to build 58 houses ,out of which 47 houses have been approved, 11 are incomplete, 26 have been completed, and 10 under processing . Considering the above points, most of the approved houses have been canceled due to several reasons.

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LINGUISTIC ABILITY OF THE PERSON, SPEECH AND COMMUNICATIVE COMPETENCE

Zukhro Akbarova

*DSc, Professor, Kokand University, Department of Education, Kokand City,
Uzbekistan*

ORCID ID: <https://orcid.org/0000-0002-8515-2868>

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ABSTRACT

This paper deals with the issue of linguistic ability of the person, speech and communicative competence. This article clarifies that the concept of personality is one of the most controversial issues in the field of linguistics. Scientists have created many theories in this regard, each of them presents its own definition of the concept.

KEY WORDS: *personality, language carrier, communicative competence, development*

Within the framework of anthropocentric and discursive paradigms that define many modern linguistics directions, scientists do not work with abstract materialized devices or equipment and deal with the concrete speech activity of people with consciousness like this researcher [8; 14]. In connection with this, logically, the person “recognizes the presence in the language field – in communication, in the patterns of behavior formed in the language, in the content of language units and texts” [4; 12], which is one of the most important and main areas of linguistic research. Today, an independent branch of linguistics – the field of linguo-personality, aimed at researching the linguistic ability, speech and communicative competence of a person, has emerged.

The concept of personality is one of the most controversial issues in the field of linguistics. Scientists have created many theories in this regard, each of them presents its own definition of the concept. However, despite the diversity of views on the nature of a person, linguists believe that the essence of the concept is individuality and uniqueness, which become a system of socially significant characteristics that signify a person as a member of society or a certain community.

Linguists and psychologists have mastered speech as a number of intellectual and cultural skills; they agree that the customs, traditions and values created by mankind are the result of the socialization of a person. Through linguistic ability, a person constantly develops, focuses on realizing his potential in activities and communication. This problem was first raised by the German scientist Leo Weissgerber, who studied the language carrier through the prism of the mother tongue phenomenon. The idea of a language carrier was put forward in the works of V.Von Humboldt, G.I.Bogin, and M.M.Bakhtin. For example, one of V.Von Humboldt’s antinomies contrasts individuality with collectivity in language [5; 65]. The ideas of this famous linguist were developed by K.Fossler and his school of aesthetic idealism. Its representatives studied the

individual language and style of writers, which is the basis for the study of idiolectics. Of course, in this regard, we should not forget the works of A.A.Potebnya. Only F.de Saussure distinguished the concepts of language, speech and speech activity separately from each other. According to him, language and speech are opposed to each other as general and private, because speech is individual and language is social. In addition, language does not depend on physical external signs, but they, for example, acoustic aspects are characteristic of speech [1; 87].

The first successful research on this topic in Russian linguistics can be seen in V.V.Vinogradov’s book “On the Language of Artistic Prose”. He distinguishes two options in the interpretation of the language carrier in artistic language – the author’s personality and the character’s personality [12; 98].

The theoretical understanding of the phenomenon represented by this phrase appeared in the 80s of the XX century, in particular, in the works of G.I.Bogin, who created the parametric model of individual differences of people and the language carrier. The researcher considered the concept of a language carrier to be the central concept of linguodidactics and understood it as “a person ready to create and understand speech” [4; 1]. In modern linguistics, there are different views and approaches to the analysis of the language carrier, which determine the main component of this concept.

Many scientists emphasize that the language carrier is a multidimensional concept, therefore, for its successful formation, all its components must be taken into account. Y.N.Barsukova evaluates the language carrier as: “a multi-dimensional, multi-level functional system that gives an opinion on language and speech ability at the level of active and creative perception of reality” [3; 5]. The language carrier as a multifaceted phenomenon is seen in modern linguistics as follows:



- Is a systemic device, the components of which are high-level personal characteristics (emotionality, communicativeness, mentality, etc.) and other internal mental processes (thinking, memory);

- Linguistic consciousness and speech play an important role in its formation;

- The language carrier has a social character, it is formed in the process of communication in small groups, on the basis of linguistic and cultural relations that reflect the characteristics of a person and his life, relations with the environment.

So, the main components of the language carrier are:

- Values (system of values);

- Worldview (system of worldviews);

- Culturological (level of mastering culture);

- Personal (Individual);

- Cognitive (understanding the lexico-phraseological possibilities, grammatical forms and constructions, methodological diversity of the native language);

- Behavior (language etiquette, behavior in normal communication situations);

- Speech Skills;

- Speech and intellectual ability;

- Speech Emotions.

In this respect, the classification of individuals is presented in many works. In our opinion, V. Karasik's contribution to the study of this issue is valuable. The scientist created a classification of the individual linguistic activity of a person based on the factor of linguistic and cultural speech [6;95].

The category of language carrier as an object of study found its place in the works of Y. Karaulov, which served as a theoretical basis for further research from the point of view of linguistic personology. He proposed three levels of a hierarchical model of the language carrier:

a) oral-semantic;

b) linguistic-cognitive;

c) motivational [7; 78].

The first-level unit is a person's vocabulary, that is, words and phrases that people use in speech practice. The second corresponds to the intellectual, cognitive sphere, the characteristic unit of which is the worldview of a person and the concept as a category of consciousness mechanism that expresses the specific features of this worldview. The third-level unit is the needs or motivation of communicative activity expressed through the intentions of the interlocutor determined by the communicative attitude.

The concept of language carrier is syncretic and interdisciplinary in nature. This category reveals its essence in an individual sense, it forms the individual thesaurus of the speaker, it is the basis for distinguishing the unique state of the speech process and its specific types, which are determined by specific parameters. Thus, we can describe the main features of the speech activity of strong, medium and weak speakers and extraverts (approachable), ambiverts (adaptable), introverts and emphasize that the level of speakers does not depend on the psychological type of the person. At the same time, we can

show that language speakers can be divided into nine types, depending on the level of speech culture and lifestyle.

Y.N.Karaulov revealed the content of the concept of language carrier, developed its structure and divided its levels. According to the scientist, a language carrier is "a set of human abilities and characteristics that determine the creation and perception of speech works (texts), which differ in terms of the level of structural and linguistic complexity as follows: a) the level of structural and linguistic complexity; b) scope and accuracy of reality reflection; c) clear target direction" [7; 101]. The structure of the language carrier at each level consists of certain types of elements: the relations between units of a certain level, their stereotypical associations, are specific to each level of structure.

These levels of linguistic personality were also filled by Uzbek linguists: D.U.Ashurova [2; 20] determined five levels of linguistic personality, N.Z. Normurodova [11; 36] distinguished four levels. Within the framework of problems related to the cognitive and linguistic and cultural aspects of the literary text Z. B. Khojjeva [13] and G. Mirsanov [9; 22] conducted research.

We believe that communicative consciousness, communicative knowledge, skills and abilities, speech ability, communicative culture and the image of taste are summarized in the language carrier.

Modern science shows the wide range of opportunities for studying language phenomena. Language is considered as an organized system of units and events at different levels with a specific sound and grammatical structure. The results of this method of scientific study of linguistic phenomena are recorded in the dictionary and grammar of one or another language, which means the implementation of the structural principle. Also, while studying language phenomena, they apply the functional principle from the point of view of their use in speech and take into account the community of those who implement them - language carriers and speakers.

At the current stage of scientific research, linguocentrism is being replaced by anthropocentrism, which studies language units not only as elements of a system, but also as a product of a carrier of national culture. Anthropocentric trends have increased interest in the role of language as a social phenomenon in the system of spiritual values of an ethnic group and in relation to the communicator himself through its semiotic possibilities.

A person does not become a person immediately, he develops gradually, and many external factors are involved in this process. Among them, one of the leading places belongs to the formation of the language carrier. In addition to the need to work, the need for communication and speech is of decisive importance in the formation of a person. Language penetrates deeply into the mind and subconscious of a person and contains a lot of information about the outside world and its laws of action.



The typology of the language carrier is one of the central problems of linguistics. For example, in traditional linguistics, the conflict between abstract and concrete language carriers has not been resolved. Typological classification of the language carrier, as mentioned above, can be studied in sociolinguistics, linguo-cultural studies, psycholinguistics and ethnolinguistics. Accordingly, defining individual types of individuals is the criteria for determining the specific characteristics of these types – the manifestation of psychological, social, cultural or ethno-cultural factors in language. When using one or another form of language, each person expresses himself in a certain way.

The forms of speech characteristic of a person are at the same time an indicator of his social status, level of education, age and gender, and individual psychological characteristics. Accordingly, the purpose of socio-cultural classification is to create speech descriptions of representatives of a certain social circle.

Choosing the linguistic-cultural factor as a factor determining the language carrier, V.I. Karasik emphasizes the linguistic-cultural types – “symbols familiar to representatives of a certain culture, the totality of situations is the culture of society” [6; 179]. For example, a scientist chooses certain types of Russians - intellectuals, merchants, officials, etc., and considers them to be relevant image models. When classifying the psychological differentiation of individuals, researchers are based on the communicative behavior that corresponds to the psychotype of the person. At the same time, attention is paid to the means of communication (classifications of Hippocrates, K.G. Yuna, E. Fromm, etc.) characteristic of a specific type of personality in psychology.

Studies in which the language carrier is evaluated as a carrier of a certain language culture are widespread. For example, V.P. Neroznak defines two types of language carriers – standard and non-standard. The scientist includes in the standard type speakers who use the average level of literary language norms in the process of interaction. In the non-standard type, it represents people who show the highest level of speech culture or, on the contrary, the lowest level [10; 76].

The criterion of belonging to one or another type of language culture is to bring the linguistic consciousness of a person closer to the ideal level of saturation in one or another form [6; 10]. Such classification is carried out according to the requirements of the level of communicative competence. When choosing a level that defines a certain type, scientists emphasize the expediency of using a rating scale that provides for determining the level of competence of a native speaker (from the highest to the lowest level), taking into account its different manifestations. It should be noted that communicative competence is a means of measuring the level of formation of effective speaking skills of a given person, because its step-by-step nature allows for assessment of competency levels.

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PECULIARITIES OF THE CHINESE APPROACH TO THE FORMATION OF THE REGIONAL AND GLOBAL SECURITY SYSTEM

Sadibakosev Khabibullo Shodiboy o'gli

PhD., Assistant professor, International Islamic Academy of Uzbekistan Dean of Islamic Economy and International Relations faculty Tashkent, Uzbekistan.

ABSTRACT

The Chinese approach to the formation of regional and global security systems is an intricate play of soft power, economic ties, and strategic diplomacy in the quest to come up with a safe environment for national development and broader global stability. Anchored on the Confucian ideal, the Chinese security strategy premises itself on harmony, stability, and the least amount of conflict. Economically, China uses the condition of being the first trade partner with quite a good number of countries to construct networks of influence and cooperation, especially through large-scale projects such as the Belt and Road Initiative. On the diplomatic level, China's vision is one of multilateral global governance, seeking to reform international institutions better to fit the plural and interlinked characteristics marking the contemporary world. This often contrasts with the Western security paradigms based on military alliances and interventionist policies. At the regional level, China seeks stable relations with its neighbors and regional security through devices such as the Shanghai Cooperation Organization and energetic participation in forums related to ASEAN. However, behind its rise are also challenges and tensions, especially on territorial disputes and growing military capabilities.

KEYWORDS: *China, regional security, global security, security system, foreign policy, international relations, multilateralism, cooperation, non-interference, common security, Belt and Road Initiative, Community of Shared Future for Mankind, peaceful development, strategic partnership, global governance.*

INTRODUCTION

Since time immemorial, securing an ordered and stable world order has been one of the primary themes in the theory and practice of international relations. The plight facing conventional security wisdom in today's global village, with its unprecedented degree of interconnection, catapulting technological change, and constantly shifting power dynamics, is hardly equaled. It is in this light that the challenge of coming to grips with the ever-altering path major powers take toward security is positioned centrally in treading through the complexities of the 21st century.

With the status of an emerging power and an extremely old nation with a special kind of political system, China's importance to the security architecture of the world cannot be underestimated. Its fast-growing economic and military power, coupled with its lively engagement in international affairs, has raised significant attention and produced never-ending debate concerning the nature of its approach towards security. If the traditional models of security, centered on Western countries, relied mainly on alliances, military power, and unilateral actions, then China's approach to security would be radically different in its emphasis on multilateralism, cooperation, and a common future for humankind.

The current article reveals the peculiarity of the Chinese approach to building regional and global systems of security. These are the cardinal principles underpinning Chinese security thinking, driven as they are by emphasis on mutual respect, non-interference, common security, and peaceful development. Such principles, from a historical perspective of China's

experience and basic understanding of the interdependent nature of the world today, have been manifested through a series of initiatives or policies oriented toward stability and cooperation within its region and globally. The article spells out, within the context of China's security vision, an active engagement in regional mechanisms such as the Shanghai Cooperation Organisation and the Association of Southeast Asian Nations Regional Forum, to mention but a few.

Moreover, through multilateral institutions like the United Nations and the G20, the institution works towards a more integrated and fair international order. This article also examines the role of China's "Belt and Road Initiative" and the "Community of Shared Future for Mankind" in promoting interdependence through infrastructural development and cooperation across continents, leading to a community with shared economic gains and security. It is also relevant because of the fast-growing influence of China in global affairs and the debate over its approach toward security that continues to dominate discourse.

MAIN PART

Basically, a regional security system is the institutional framework that some countries create when they are geographically proximate to one another, with the sole aim of seeking attention to problems of security interest and their ensuing stability. Most of these systems emanate from shared interests, threats, or the desire for collective defense. What may force countries to form such systems includes historical ties, cultural similarities, economic interdependence, and geopolitical considerations. One of the prime characteristics of



regional security systems is an emphasis on cooperation and coordination among member states. This might operate through joint military exercises, shared intelligence, coordinated responses to security threats, and an overriding process of diplomacy in conflict resolution¹. For instance, one of the leading regional security systems is the North Atlantic Treaty Organization, which covers the NATO region of North America and Europe. The NATO members are committed to collective defense, which means that an attack against one of its members is an attack against all. The concept of collective defense helps deter potential aggressors.

Other regional security system functions include providing a platform to fight non-military threats such as terrorism, organized crime, and cyber threats². In that respect, the capacity of the member states to counter such challenges is enhanced through sharing of resources and expertise. Regional security systems usually also play an important role in peacekeeping and management of conflicts by offering mechanisms for mediation and dialogue, thereby preventing or managing disputes. However, regional security systems are not free of problems. Different national interests, political ideologies, and strategic priorities may cause frictions between the member states, which would eventually cause the effectiveness of the system to erode³. Furthermore, there is the likely impact of an external power over regional security dynamics, which may further complicate any efforts aimed at securing autonomous and coherent system maintenance.

The global security system is the harmonized effort of the international community in addressing security-related challenges that supersede or cut across national and regional boundaries⁴. Contrary to regional security systems, the global security system creates a robust framework that attempts to integrate manifold dimensions of security threats related to traditional military conflicts, transnational terrorism, cyber warfare, climate change, pandemics, and economic instability. The global security system is essentially anchored by international organizations and treaties providing for inter-state cooperation and coordination. The United Nations is the chief pillar underpinning the global security system. Its Security Council performs a key role in maintaining international peace and security. Furthermore, the UN plays a major role in facilitating diplomatic negotiations and imposing sanctions, mandating peacekeeping missions, and holding a framework

within which states take up any security concerns to address through dialogue and consensus⁵.

Another key element of the international security system is international law, which is reasoned by norms and rules that regulate state behavior⁶. In this regard, agreements like the Treaty on the Non-Proliferation of Nuclear Weapons and the Paris Agreement on Global Climate Change are ways through which an attempt is made to deal with certain questions about security at the global level. The main purpose of the treaties was to avert the risk of conflict by establishing cooperation and compliance with such issues and promoting sustainable development. The contribution of the different levels in the security of various non-state actors, such as international organizations, non-governmental organizations, and multinational corporations, helps to support global security. These are institutions that complement the effort to handle the security challenge by making provisions for humanitarian needs, advancing human rights, and pursuing economic development⁷. It can't be denied that a set of challenges is felt within the global security system. The complexity and diversity of the threats to security demand holistic and coordinated responses that are hard to realize, for the simple reason that states have different interests and capabilities⁸. Power imbalances, geopolitical rivalries, and an inability to enforce these many various actions further complicate the ability to ensure global security. Added to this is the eruption of non-state actors in the forms of terrorist organizations and cybercriminals that post very new challenges, which the state-centered approach to security is not well positioned to handle.

RESULTS AND DISCUSSIONS

The tributary system, which characterized China's foreign relations for centuries, provides an important starting point toward grasping its historical security approach. This type of system established a hierarchical order within East Asia, based on the concept of "Heaven's Mandate" and the emperor as the "Son of Heaven." The tributary states acknowledged the preeminence of China and subordinated themselves to its authority by paying tribute and, in turn, receiving imperial recognition, protection, and trade privileges⁹. The tributary system basically dealt with regional security and paid more attention to the local area in the vicinity of China. It encompasses the entire region of East Asia, including such vassal states as Korea, Vietnam, Japan, and many others. Contacts with those states beyond this region existed but were

¹ Amandine Gnanguênon, Stephanie C. Hofmann. (2024). "Regional security cooperation." *Handbook of Regional Cooperation and Integration*, Edward Elgar Publishing Limited, pp:164-181.

² Wiesław Lizak, Kamil Zajączkowski, Malwina Ewa Kotodziejczak. (2021). "Non-military aspects of security in the changing international order" *Security and Defence Quarterly*, 33(1); pp:7-13.

³ Dreyer, J. T. (1996). *Regional Security Issues*. *Journal of International Affairs*, 49(2), 391-411.

⁴ Radoslaw Ivaňčík, Vojtech Jurčák, Pavel Nečas. (2014). "On some contemporary global security risks and challenges." *Security and Defence Quarterly*, 4(3); pp:34-49.

⁵ Malla, K.B. (2007). "UN Security Council Reform And Global Security." *Asian Yearbook of International Law*, Volume 12, Brill, pp:31-56

⁶ Kun Xu, Zhiping Lv, Jiayi Li. (2024). "Global Security Initiative and the Development of Contemporary International Law." *5th International Conference on Education, Sport and Psychological Studies*, Vol.8, pp:64-71

⁷ Blair, A., & Curtis, S. (2009). "Non-State Actors." *International Politics: An Introductory Guide*, Edinburgh University Press; pp:173-206

⁸ Raghavan, V. R. "Challenges to Global Security." *Pakistan Horizon* 60, no. 3 (2007): 23-39.

⁹ Kang, D. C. (2010). *Hierarchy and Legitimacy in International Systems: The Tribute System in Early Modern East Asia*. *Security Studies*, 19(4), pp:591-622



low in number and not that well systematized. It made sure that there was stability within the Chinese sphere of influence, and it came out as the dominant regional power. While it had been extremely successful in keeping regional stability for centuries, the tributary system nonetheless retained some very serious limitations. It was, after all, a hierarchical and rather rigid system, open to constant challenge from would-be rising powers. The gradual decline of the Qing Dynasty during the 19th century and increased interference from Western powers cut down the very fragility of this security order. Thus, it was unable to eventually survive due to the inability of the system to adjust itself into the changing global scenario.

What made the security dilemma of China in the Cold War different and peculiar was that it created a “two-front” threat with both the United States and the Soviet Union. While the Soviet Union presented a territorial threat with its expansionist ambitions in Central Asia and the ongoing border conflict with China, the US represented an ideological and military opponent of gigantic might with its global reach and growing presence in East Asia.

The initial orientation that China had taken up with the Soviet Union, moulded in the years immediately following World War II, began to dissolve due to ideological differences and territorial disputes. This ideological chasm widened in the 1960s as China began rejecting Soviet interpretations of Marxism-Leninism and challenging its leadership among the communist bloc. This ideological split opened the avenue for a series of border clashes in 1969 that would further strain relations. In such a two-front threat environment, strategic ambiguity would be the overall strategy that China would embrace. The approach would introduce deliberate obscurity over its alliances and intentions to deter both superpowers from intervening in Chinese affairs. The strategy served China pretty well, as it could retain some amount of flexibility while safeguarding independence and pursuit of national interest.

China was an avid promoter of nonalignment during the Cold War years, seeking closer ties and forging alliances with other developing nations to try to challenge the power balances in place then. Its membership in the Non-Aligned Movement in 1964, among other newly developing countries of that time, like India and Egypt, raised the role of China in international affairs. The strategy enabled Beijing to exploit the rivalry between the US and the Soviet Union over influence in the Third World and attracted political and economic benefits. Mao Zedong’s “Three Worlds” theory in 1974 solidified China’s strategic outlook in the era of the Cold War¹⁰. It divided the world into three groups:

- The First World: This group encompassed developed capitalist countries, led by the United States¹¹.

- The Second World: This group encompassed socialist countries, led by the Soviet Union¹².
- The Third World: This group encompassed developing countries, representing the majority of the world’s population¹³.

China attempted to assume the role of superpower of the Third World, building solidarity with fellow developing nations and opposing the prevailing global power relations. In that respect, this theory has it that China aspires to play a leading role in the shaping of the post-Cold War world order and be at the forefront in supporting the aspirations of developing nations. The theory of “Three Worlds” enabled China to build alliances with other developing nations in the world while challenging the superpowers. It provided China with the possibility of postulating itself as a champion for the oppressed and an alternative to the existing strategy. Chinese diplomacy was therefore very effectively positioned by setting it as one of the major players in the global political field and building relationships with a wide array of countries around the world.

China began to build a network of alliances with the Third World in its interests and international support. This approach helped to counterbalance the influence of the two superpowers, the US and the Soviet Union, weakening their hegemony and giving shape to a multipolar world. The theory of the “Three Worlds” proved to be quite an effective way to gain China’s legitimacy in the international arena and mobilize support for its interests. Though aligned with the Soviet Union, China had started looking toward a strategic opening with the West since the early 1970s. With the completion of the Sino-Soviet split, and also afraid of Soviet expansionism, China slowly moved closer to the US. It was actually a surprise that in 1972, President Richard Nixon visited China, which turned out to be a milestone in the bilateral relationship of the US with China and set it onto a new course of cooperation. It is in this context that this strategic adjustment could enable China to play off US-Soviet rivalry and maximize the security of balance of power¹⁴.

The end of the Cold War paved the way for a new age of international relations characterized by the rise of a multipolar world. With the Soviet threat to China’s borders coming to an end, China could begin to shift its attention and resources toward economic development and international status. It was in this new context that there began a basic shift in Chinese security thinking, most clearly articulated in the promulgation of a “New Security Concept” in 2004¹⁵. The “New Security Concept” was a dramatic departure into multilateralism, with a much greater dedication to a considerably more cooperative international order. It focuses on common responsibility for security, mutual trust, and dialogue. This concept therefore

¹⁰ Kang, L. (2015). *Maoism: Revolutionary Globalism for the Third World Revisited*. *Comparative Literature Studies*, 52(1), pp:12-28

¹¹ *What Is a First World Country?*

<https://www.investopedia.com/terms/f/first-world.asp>

¹² *Second World Definition*

<https://www.investopedia.com/terms/s/second-world.asp>

¹³ Tomlinson, B. R. (2003). *What Was the Third World?* *Journal of Contemporary History*, 38(2), pp:307-321

¹⁴ Hummel, A. W. (1989). *China’s Changing Relations with the U. S. And U. S. S. R. Proceedings of the American Philosophical Society*, 133(1), pp:75-83

¹⁵ Larus, E. F. (2005). *China’s New Security Concept and Peaceful Rise: Trustful Cooperation or Deceptive Diplomacy?* *American Journal of Chinese Studies*, 12(2), pp:219-241



echoes deeper in the light of China's own realization that, concerning the question of security in the 21st century, it is no longer about mere national power but collective action and cooperation.

China's "New Security Concept" has laid much emphasis on the need for an umbrella security framework, founded on mutual trust and shared responsibility. This idea goes against traditional notions of security that rest on military might and interests of nations. Rather, it reflects a more comprehensive approach to economic, social, and environmental dimensions of security. Together with the "New Security Concept," China also launched a "peaceful rise" strategy that aims to set the world's mind at ease over its purely peaceful nature and strive cooperatively for international order. The goal of the strategy was to dispel anxieties in the world over the rise in power of China and to build trust with other countries. Even though the "peaceful rise" has been interpreted in many ways, it clearly shows the commitment of China to engaging with the world and playing a responsible role in the shaping of the international system.

Even with initiatives like the "New Security Concept" and the strategy of "peaceful rise," strategic ambiguity remains at the very core of China's security thinking in this 21st century. It has generated soaring concern over its intentions as Chinese military power rises, growing assertiveness in the South China Sea, and the continuous pursuit of an accelerated "String of Pearls"¹⁶. China's strategy for a "String of Pearls", a network of military bases and strategic partnerships across the Indian Ocean - heightens concern of growing power projection capable of challenging the prevailing regional and global security order. This strategy, aimed at keeping access to vital sea lanes safe and energy interests secure, has increased tension with the nations in the region, especially India.

The tightrope walk between economic development and national security remains a challenge for China's security thinking. Its economic growth aspiration, linked to the ambition of becoming a world power, resulted in increasing military spending and the development of state-of-the-art military equipment and capabilities. This created a perception of possible militarism and growing risks of confrontation. The so-called "Thucydides Trap", the notion that war between a rising and currently dominant power is inevitable – has become central in international relations¹⁷. This tension, caused by economic rivalry and strategic competition, puts a huge challenge to global stability.

¹⁶ Ashraf, J. (2017). *String of Pearls and China's Emerging Strategic Culture*. *Strategic Studies*, 37(4), pp:166-181.

¹⁷ Nye, J. S. (2020). *Perspectives for a China Strategy*. *PRISM*, 8(4), pp:120-131.

¹⁸ Clarke, M. (2017). *The Belt and Road Initiative: China's New Grand Strategy?* *Asia Policy*, 24, pp:71-79.

¹⁹ Huasheng, Z. (2013). *China's View of and Expectations from the Shanghai Cooperation Organization*. *Asian Survey*, 53(3), pp:436-460.

Unlike the traditional models of security as developed in the West, the Chinese framework places primary concern on cooperation, mutual interests, and non-interference in the internal affairs of other countries. Quite the opposite of hegemonic ambition that is sometimes associated with the West, to China, security implies collective action and common destiny. Indeed, this is realized through its active involvement in regional organizations such as the SCO and ASEAN Regional Forum, and in its own initiative of the Belt and Road Initiative.

The BRI is a strategic framework that aims to build connectivity and foster common prosperity across infrastructure projects in Eurasia and African countries. Indeed, this policy proposes that economic development and connectivity may offer new ways of improving security, as things like poverty, inequality, and instability are among the major causes of conflict¹⁸. What this approach stresses is shared benefits and peaceful dispute resolution, which is implemented through open dialogue and negotiation sharply different from the militaristic approach of traditional security alliances.

The SCO, a regional security and economic organization, provides a platform for China to collaborate with its neighbors on a range of issues, including counterterrorism, drug trafficking, and border security. The SCO's commitment to mutual respect, non-interference, and collective security echoes China's own values, fostering an environment of trust and cooperation within the region¹⁹. The organization's focus on promoting economic development, particularly through its emphasis on energy and resource sharing, further reinforces the connection between economic cooperation and regional security.

The fact that China is a member of the ASEAN Regional Forum, established as the foremost forum for dialogue and cooperation in Southeast Asia, speaks loudly for its commitment to regional stability and the guarantee of non-interference in the affairs of other nations²⁰. Confidence-building measures, preventive diplomacy, and conflict resolution describe this forum and converge with China's peaceful coexistence and diplomatic solution approach. More importantly, the very fact that China has accepted the "ASEAN Way" of consensus-building and non-confrontation within its framework underlines the regime's willingness to work regionally by building bridges and establishing trust.

The idea of a Community of Shared Future for Mankind stresses China's aspirations toward a world that is more just, equitable, and secure²¹. At its very root, this vision shows

²⁰ Whiting, A. S. (1997). *ASEAN Eyes China: The Security Dimension*. *Asian Survey*, 37(4), pp:299-322.

²¹ Lee, K., & Sullivan, A. (2019). "China's Evolving Approach to Global Governance." *People's Republic of the United Nations: China's Emerging Revisionism in International Organizations*, Center for a New American Security, pp:3-6



shared responsibility toward problems of global dimensions – climate change, terrorism, poverty and enjoins a turn away from zero-sum competition to win-win cooperation. This was a vision that would strike a chord in China’s cultural consciousness, steeped as it is in Confucian precepts of harmony and respect.

CONCLUSION

China’s approach to security deviates from the conventional focus on military alliances, strategic competition, and unilateral actions. It instead emphasizes economic diplomacy, peaceful coexistence, multilateralism, cultural values, and non-alignment, forming a unique and multifaceted approach to global security. China’s rise and its unique approach to security present a turning point in the history of international relations. The world is entering a new era of multipolarity, where the traditional power dynamics are being challenged and new models of security are emerging. The success of China’s approach will depend on its ability to address internal challenges, build trust with other countries, and demonstrate a consistent and transparent foreign policy that aligns with its stated goals of a more inclusive and cooperative international order. What is being closely watched by the world is the way through which China’s special way will play out on security grounds, defining the 21st-century global view. One critical feature of China’s rise in the global arena is how its approach to security can finally shape international relations in the future. The world needs to engage itself with China’s vision, its complexities, and intricacies to navigate a labyrinth of security into a peaceful and prosperous future for all. In such a scenario, fostering dialog, mutual understanding, and commitment to common security by cooperation and respect, rather than conflict and competition, becomes critical in this new era of multipolarity. The future of global security depends on how well all nations, China included, can work toward a new paradigm based on shared interests, peaceful co-existence, and collective action – in recognition of the fact that the entwining of the 21st century calls for a shared way forward in building a secure and stable future for all. This paper has provided a framework for understanding the distinctive features of China’s approach to security. Further research is needed to delve deeper into the implications of this approach for the global security architecture, exploring the challenges and opportunities it presents, and analyzing its potential impact on existing security alliances and power dynamics.

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UNCOVERING THE DIMENSIONS OF ISO 9001 CERTIFICATION EXPERIENCE: AN EXPLORATORY FACTOR ANALYSIS

Dr. N. Somasundaram¹, R. Ravisankaran²

¹Head & Associate Professor (Retd.), Department of Management Studies, Arumugam Pillai Seethaiammal College, Thiruppattur.

²Research Scholar, Research and Development Centre, Bharathiar University, Coimbatore – 46.

ABSTRACT

This study investigates the multifaceted experiences of organizations after achieving ISO 9001 certification, with a focus on uncovering the underlying dimensions that shape their journey. Employing exploratory factor analysis, this research identifies key parameters that influence the certification experience, providing a comprehensive understanding of the benefits, challenges, and outcomes encountered by respondents. By shedding light on these critical factors, this study offers actionable insights for organizations seeking to optimize their quality management practices and maximize the value of ISO 9001 certification.

KEY WORDS: ISO 9001 Certification, Parameters of Experience, Quality Management Practices

INTRODUCTION

ISO 9001 certification is a cornerstone of quality management excellence. Examining the post-certification experiences of organizations can reveal valuable lessons for enhancing quality management systems, driving continuous improvement, and sustaining long-term success. This knowledge can also inform the development of effective support systems, training programs, and policy initiatives that foster a culture of quality and excellence.

STATEMENT OF THE PROBLEM

Despite the widespread adoption of ISO 9001 certification, there is a lack of understanding about the experiences of organizations after obtaining certification, particularly in the context of Madurai District's industrial estates. This knowledge gap hinders the ability of organizations to optimize their quality management practices and maximize the benefits of certification.

NEED FOR THE STUDY

This study aims to address this knowledge gap by exploring the experiences of organizations after obtaining ISO 9001 certification in Madurai District's industrial estates. By identifying the key factors that influence the certification experience, this study will provide valuable insights for organizations seeking to improve their quality management practices, policymakers, and certification bodies. The findings will also contribute to the development of effective support systems, training programs, and policy initiatives that foster a culture of quality and excellence in the region.

OBJECTIVES

- To identify the important parameters of respondents' experience after getting ISO 9001 certification
- To reduce the dimensions of the experience using exploratory factor analysis.

METHODOLOGY

This study employed a survey-based approach to collect data from 424 respondents from different industry scales, including Medium Industry, Micro Industry, Small-scale Industry, and Large-scale Industry, located in Madurai District, specifically in Urk-Pudur Industrial Estate, Uranganpatti Industrial Estate, Kappalur Industrial Estate, and other locations. Data collection was conducted using a 5-point numerical scale, and exploratory factor analysis (EFA) with varimax rotation was performed to analyze the data and identify the underlying factors.

Exploratory Factor Analysis for parameters experience after getting ISO 9001 CERTIFICATION

Exploratory factor analysis was performed in order to identify the important parameters of respondent's experience after getting ISO 9001 CERTIFICATION.

Initially, the scores of the seventeen parameters of experience after getting ISO 9001 certification (obtained from 5 point numerical scale) have been taken for testing the validity of data for factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's test of sphericity have been tested. The KMO measure of sampling adequacy of 0.639 is greater than required minimum of 0.5, and the zero per cent level of significance of chi-square value satisfies the data validity for factor analysis. Then, the scores of the seventeen items of experience after getting ISO 9001 certification in organization are taken for factor analysis in order to summarize these 17 items into meaningful factors. The factor analysis results in five important factors from seventeen attributes of experience after getting ISO 9001 certification. The five important kinds of experience after getting ISO 9001 certification, number of variables in each factor, its reliability co-efficient, Eigen value and the per cent of variance are illustrated in table 1



**TABLE -1
 RESULTS OF KMO AND BARTLETT'S TEST**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.639
Bartlett's Test of Sphericity	Approx. Chi-Square	730.222
	Df	78
	Sig	0.000

**TABLE- 2
 FACTOR ANALYSIS FOR EXPERIENCE AFTER GETTING ISO 9001 CERTIFICATION**

Sl.No	Factor	Statement	F-Loading	Eigen Value	Percentage of Variance	Cumulative Percentage
	Factor1	To see the efficiency of company processes after implementing ISO 9001 and improve the weak areas	0.742	1.807	14.851	14.851
		Company identification increased	0.727			
		To get new customers	0.704			
		Quality of the product increased	0.699			
	Factor 2	Redundancy of the work is eliminated by defining the responsibility and authority of each employee	0.712	1.547	11.567	26.418
		Employee motivation improved due to ISO certification	0.693			
		To collect the process data to analyse and take corrective actions to align with yearly turn over	0.686			
	Factor3	To verify the product scraps, root cause analysis, corrective actions to prevent the	0.741	1.523	11.889	38.307
		Identification and traceability of the product increased	0.719			
		To reduce scrap cost and improve process efficiency to increase profit	0.613			
		To understand the business environment to be a competent player in the business	0.602			
	Factor4	After ISO 9001 certification able to identify the skill, knowledge level required for	0.749	1.481	11.395	49.702
		ISO 9001 is a requirement to do manufacturing business to global standards as we are	0.714			
		Able to evaluate our strength and weakness wrt ISO 9001 by implementing Internal audit,	0.684			



	Factor5	To know what is Quality policy, Quality objectives, What is corrective action, preventive action and non-conformity management, calibration of instruments	0.725	1.470	11.310	61.012
		To verify the records at end of the year for all the process	0.687			
		To demonstrate process implementation to the customer by documentation	0.610			

Source: Primary Data

The above table exhibits that the components of experience after getting ISO 9001 CERTIFICATION of the enterprise are analyzed through the factor analysis by the varimax method of orthogonal rotation. The rotation of components states that there are five factors, which have Eigen value more than 1. The last column in the table shows that the five factors extracted together account for 61 per cent of total variance. Thus, the above 17 variables are reduced to 5 factors. One has lost about 39 per cent of the information content, while 61 per cent is retained by the 5 factors extracted out of the 17 original variables.

On factor 1, the four variables have loadings of 0.742, 0.727, 0.704, and 0.699 respectively. This suggests that factor 1 is a combination of these 4 original variables. They are: To see the efficiency of company processes after implementing ISO 9001 and improve the weak areas, Company identification increased, To get new customers, Quality of the product increased. The factor 1 could be named as "**Operational Excellence**".

On factor 2, the three variables have loadings of 0.712, 0.693 and 0.686 respectively. This suggests that factor 2 is a combination of these 3 original variables. They are: Redundancy of the work is eliminated by defining the responsibility and authority of each employee, Employee motivation improved due to ISO certification. To collect the process data to analyze and take corrective actions to align with yearly turn over. The factor 2 could be named as "**Process Optimization**".

On factor 3, the four variables have loadings of 0.741, 0.719, 0.613, and 0.602 respectively. This suggests that factor 3 is a combination of these 4 original variables. They are: prevent the reoccurrence of the same, Identification and traceability of the product increased, To reduce scrap cost and improve process efficiency to increase profit, To understand the business environment to be a competent player in the business. The factor 3 could be named as "**Quality Management and Competitiveness**".

On factor 4, the three variables have loadings of 0.749, 0.714 and 0.684 respectively. This suggests that factor 4 is a combination of these 3 original variables. They are: After ISO 9001 certification able to identify the skill, knowledge level required for each process and training requirements of new and existing employees, ISO 9001 is a requirement to do

manufacturing business to global standards as we are linked with global economy, able to evaluate our strength and weakness wrt ISO 9001 by implementing Internal audit, Management review meeting regularly. The factor 4 could be named as "**ISO 9001 Compliance and Capability Building**".

On factor 5 the three variables have loadings of 0.725, 0.687 and 0.610 respectively. This suggests that factor 5 is a combination of these 3 original variables. They are: To know what is Quality policy, Quality objectives, What is corrective action, preventive action and non-conformity management, calibration of instruments, To verify the records at end of the year for all the process done, To demonstrate process implementation to the customer by documentation, The factor 5 could be named as "**Quality Management System (QMS) Governance**".

RESULTS

- Five factors emerged from the analysis, accounting for 61% of the total variance
- Factors were named as:
 1. Operational Excellence
 2. Process Optimization
 3. Quality Management and Competitiveness
 4. ISO 9001 Compliance and Capability Building
 5. Quality Management System (QMS) Governance

CONCLUSION

ISO 9001 measurements are completed by machines and equipment that are verified for use, or have already been approved by their requirements. ISO 9001 is a useful basis for organization to be able to demonstrate that they are managing their business so as to achieve consistent quality products and services. The study identified the important parameters of respondents' experience after getting ISO 9001 certification. The five factors emerged from the analysis can be used to improve quality management practices and enhance the benefits of ISO 9001 certification.

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INFLUENCE OF WOMEN EMPOWERMENT PROGRAMS ON HOUSEHOLD DECISION-MAKING IN NAROK NORTH SUB-COUNTY, NAROK COUNTY, KENYA

Elizabeth Takai¹, Zeddy Lemein², Misati Joseph³

¹Elizabeth Takai, Department of Social Studies, Maasai Mara University, P.O Box 861-20500, Narok, Kenya

²Zeddy Lemein, Department of Social Studies, Maasai Mara University, P.O Box 861-20500, Narok, Kenya

³Misati Joseph, Department of Social Studies, Maasai Mara University, P.O Box 861-20500, Narok, Kenya

ABSTRACT

The World Bank report indicated that women's empowerment was considered the expansion of the abilities of women to make strategic life choices in a context where the abilities were previously limited. Despite these developments, the role of women in decision-making in developing countries, particularly in pastoralist communities is a subject of scrutiny. Therefore, this study examined the influence of women empowerment programs on household decision-making in Narok North-Sub County. The specific objectives of the study were; to assess the effect of capacity-building programs, microfinance programs, and health care programs on household decision-making among women in Narok North Sub County. The study employed two theories; system and feminist theory. The descriptive survey design was adopted for this study. The study targeted 59,996 households. A sample of 382 respondents was obtained. Cluster, simple random sampling and purposive methods were used to obtain participants in the study. For primary data, both questionnaires and interviews were used as the data collection instruments while document review was performed for secondary data. Quantitative data was analyzed using a statistical package for social sciences software (SPSS version 27). The findings were presented using descriptive statistics in the form of frequencies, percentages means and standard deviations. In addition, tables and charts were also used. The results indicated all the variables were significant. Microfinance Programs showed a significant effect on Women's Decision Making in households. Healthcare care programs showed a significant effect on Women's decision-making in households and capacity building also had a significant effect on Women Decision decision-making in households. The study recommended that; the government should offer more avenues for capacity building for women to be equipped with skills and knowledge that will support them to effectively participate in household decision-making.

KEYWORDS: women empowerment, decision-making, household, microfinance, health, capacity building

INTRODUCTION

In a World Bank report of 2019, women empowerment is considered as the expansion of the abilities of women to make strategic life choices in a context where these abilities were previously denied [1]. According to Ali, and Hatta [2] defined women empowerment as the participation of women in the decision-making process and their access to power to achieve, equality, development, and peace in all spheres of society. Women empowerment therefore can be stated as the capacity of women to control their income, access employment opportunities, own assets, and make a decision.

Women empowerment is not limited only to selected societies, deliberating the global aspect in this regard, brings us to the notice that women are being given equal treatment in developed nations but not in developing countries. If history is recollected it is established that women have always been given secondary positions in society, while the difference between men and women is socially constructed. It is through education that we realize this fact. Scholars and practitioners alike consent that

gender equality is attained when both men and women enjoy the same opportunities [3].

Akhter, et al [4], indicate that when American women realized that there was an imbalance between men and women in society, they opposed this unfairness which was meted out to them by way of a huge movement (women's liberation movement), through which they asked for equal rights. In the elimination of injustice, the UNO (United Nations Organization) framed an agreement which is called 'The Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), which further led to the formation of the Women's Commission [5]. UNDESA, [6] verified that there are positive multiplier effects for overall social and economic development when women, equally as men, access economic and financial resources. This is seen through poverty reduction, children's increased welfare and increased household efficiency.

Globally, the disparity of the ratio of men to women is not significant, but women have less authority. Women execute 66 percent of the world's work, produce 50 percent of the food yet



earn only 10 percent of the income and own one percent of the world's property [4]. Mainstream economic analysis assumes that economic opportunity and outcome are equally and evenly distributed across social segments, opportunities and outcomes. It is estimated that women form up to 70 percent of the world's population who live in poverty [7].

In developed countries such as the USA Mexico, positive impacts of women empowerment were realized in business ownership, income, and employment [8]. Robinson [9] noted that most micro-finance programs help women to meet their practical gender needs like buying food, educating children, repaying debt, and getting health care. While India empowerment programs have contributed to poverty alleviation and food security through enhanced investment leading to consumption and improved economy, [10].

Ahmed and Wasim [7] noted that there was poverty reduction for those women who participated in micro-credit program in Zambia. The program was not directed towards the poorest business operators but one-third of the clients who were below the national poverty line. In Ghana, the findings of Akudugu *et al.* [11] confirmed that financial assistance from micro-finance institutions has positive contributions toward women livelihood through improved access to healthcare, education and increased income levels. Peprah *et al.* [12] confirms that empowerment programs significantly improved the well-being of women in Ghana. However, it is important to note that most of these studies have not clearly indicated how empowerment programs assist in the participation of women in decision making.

Kratzer and Kato [13] noted that women in African countries such as Tanzania, Rwanda, Uganda, and Kenya are denied access to credit facilities due to lack of quality education and collateral as they don't have any assets. As a result of this, it is assumed that they lack the specific skills to manage their work. On the contrary Ahmed, and Wasim, [7] observed that access to empowerment programs especially micro-finance did not have any significant effect on women empowerment in Uganda.

In Kenya, women are still struggling with acceptance by the society as part and parcel of development as some communities still regard women as children. Many communities for instance Maasai in Kenya have legalized early marriages through customary laws and there end up removing girls from schools because of the wealth they gain [14]. Despite the fact that Kenya has embraced campaign against gender disparity, the girl child still lacks equal education opportunities as boy child [15]. There has been frustration from the male parliamentarians who are dominant in parliament hence the two thirds gender rule bill encounter difficulty before adopted and became law 2010. Most of the laws that have been brought to parliament to support the

women have been frustrated. In Narok the situation is not different, a study by Anthony [16] indicated that men in the maa community are responsible for decision making in terms of who owns property and who joins school. The effect of women empowerment and their participation in decision making at the household is a subject that require further evaluation hence the need for this study.

1.2 Statement of the Problem

Among the pastoralist communities' specifically Maasai Community, gender inequality is acute and deep-rooted much more than the society at large. Women have low literacy levels, very restricted roles in public life and ownership of livestock property (cattle and sheep) which is the main sources of wealth in pastoral economics. This gives them no chance of participation in decision making. Despite recent developments gender parity, women are still excluded in making of major economic social and political decision making, acknowledging that empowerment of women will improve their status generally and enable them to actively and effectively participate in key decision-making processes. Notwithstanding women's contribution to the fabric of the household, women are commonly underestimated and ignored in community development strategies and key decision-making processes. Inadequate gender-dis aggregated data on community decision-making roles means that women's roles and contribution to decision making at the community level, in particular among the Maa community is poorly understood. Most of the studies in the literature have not clearly indicated how the various programs have contributed to the empowerment of women in decision making at the household level. Therefore, the study sought to bridge this gap by examining the influence of women empowerment programs on household decision in Narok North Sub – County, Narok County, Kenya.

METHODS

3.1 Study Area

The study was conducted in Narok County and specifically in Narok North Sub- County. Narok north sub-county constitutes six wards namely Olorropil, Olposimorru, Olokurto, Nkareta, Melili and Narok town wards. In this area the community practice livestock farming and crop farming. The main crops grown in this area are wheat, barley and maize. Narok County is located on the South Rift Valley region bordering the Republic of Tanzania to the south, Kisii, Migori, Nyamira and Bomet counties to the West, Nakuru County to the North and Kajiado County to the East. The county area is 17944km² representing 3.1 % of the whole Country's area. The headquarters of the county is Narok Town. The specific research area is Narok north sub-county that is adjacent to the Mau Forest with an estimated 59996 households. It covers an approximate area of 4663.7km² [17]. The study area is presented in figure 1.



Figure 1: Map showing study area

3.2 Research Design

According to Burn and Grove [18] a research design is a guideline for the research process in order to achieve the intended results that would be a reflection of the reality. This study adopted a descriptive survey design. This research design was adopted because the variables of the study cannot be manipulated and that the data was collected from the respondents in their natural working environment. The perceptions and views of the respondents were sought in examining the relationship that exists between the variables of the study. The design is preferred because it attempts to describe such things as possible behavior, attitudes, and values hence reporting the way things are [19]. This design was also preferred because there was need to describe study respondents in regard to their behavior, attitude due to women empowerment.

3.3. Target Population

Based on 2019 National Census, Narok County has a population size of 1,149,379 and a ratio of men to women of almost 1:1. The Maasai are considered the most dominant population in the county. According to the KNBS [20] report the county distribution of female population aged between 25-60 years is 251,862. The report further indicates that the number of households in Narok North Sub County is 59996. These figures were further confirmed by the Narok County Integrated Development Plan [21].

The choice of Narok North Sub County for the study is guided by the fact that the area is cosmopolitan and has the highest number of women and households in the entire County. Being close to the main Narok town, the study attract more women with the required information on the programs used in empowering of women to enhance their decision making at household level. The household was used because it is the most appropriate unit that provides a representation of majority of the women who are faced with many decisions to make in the household and this enabled the researcher collect appropriate data for the study. Therefore, the target population was 59,996 households in Narok North Sub County who will be part of the key informants. The list of households from the chiefs and wards administrators will form the basis for the sampling frame.

3.4 Sample Size and Sampling Procedure

3.4.1 Sample Size

The sample size for this study was estimated using the sampling table designed by Krejcie and Morgan [22]. According to Krejcie and Morgan, the appropriate sample size for a larger population not exceeding 100,000 is estimated to be 384 respondents. The study targeted women aged above 18 years from 59996 households and the sample size as per the table shows that the sample size that was selected for this study was 382. In an event where the selected household missed a woman, the next household was selected as per the sampling frame. For the interviews, two (2) men were selected purposively from each



ward totaling to 12 (twelve) specifically these were either chiefs, sub-chiefs or village elders. This enabled the researcher to establish the perception of men on women empowerment. The

382 sample was distributed proportionately amongst the wards as per the respective population as shown in table 1 below.

Table 1: Sampling proportionately as per the ward

Ward	Households Population	Proportionate Sample
Narok town Ward	16236	103
Melili Ward	12719	81
Nkareta Ward	6904	44
Olokurto Ward	7191	46
Olposimorru Ward	6846	44
Olorropil Ward	10101	64
TOTAL	59996	382

Source: Census (2019)

3.4.2 Sampling Procedure

The study used cluster sampling technique, simple random sampling method and purposive sampling to select the sample from the households. According to Babbie and Creswell, [23] simple random sampling is used in selecting a sample from a homogenous population. While cluster samplings ensured that all the wards in the sub county were selected Purposive sampling was used to obtain the key informants who were two (2) men selected from each ward totaling to 12. The sampling frame that is the list of all the households in division was collected from the chief's office or ward administrator and with their guidance the selection was done.

3.5 Data Collection Instruments

The study employed both primary and secondary data. The study used structured questionnaires and interview schedule as the main instrument for primary data collection. A questionnaire is a set of question item that is used to collect data from respondents especially in cases where the respondents are spread out to a larger area. A questionnaire has the advantage of allowing the respondents ample time to keenly go through the question items and respond to them appropriately. According to Kothari [24] the main advantage of using a questionnaire is the fact that it can be used on a large sample thus making the study dependable and reliable. It is for this reason that the study used a questionnaire, since the sample size was large. However, questionnaires are faced with the challenge of high non-response rate hence require a lot of follow up (Gay) [25] and also it is difficult to ascertain the relevance and accuracy of the responses given. This prompted the researcher to employ interviews to complement the questionnaire data.

The questionnaire was in three sections. Section A comprised general information of the respondents. Section B with six (6) items measured the influence of capacity building credit facility programs and health care programs on women decision making. The questionnaires were constructed using a five scale Likert

where 1- no extent at all, 2- small extent, 3- neutral, 4- Large extent and 5- Very Large Extent.

A Likert scale questionnaire is widely used in descriptive studies to describe the opinion of the respondents and this can be effectively done on a scale. The questionnaires were pre-tested on a total of 38 women from households in Narok South Sub County specifically Olololunga Ward. The 38 households were not be considered for the main study to avoid bias. The relevance of the pilot is to ensure that the items contained in the instruments conform to what the study expects to address. Secondary data was obtained from document reviews from the library and online journals.

3.6 Validity and Reliability of the Instruments

The instruments were validated through both face and content validity. Validity refers to the degree to which the sample of the test represents the content that the test is designed to measure [26]. For this study both content and face validity was tested by requesting experts from the field of study as advocated by (Mugenda and Mugenda) [19]. The supervisor and other experts at the school of Arts, Humanities Social Sciences and Creative Industries were consulted to give their view on the content and face validity of the questionnaire and their views and opinion incorporated in the questionnaire. Factor analysis using Statistical Package for Social Sciences Software was used will be used to compute the KMO value which according to Field [27] an index of 0.4 and above is appropriate for the study to be considered valid and to have an appropriate sampling adequacy.

3.6.2 Reliability of the Research Instruments

Reliability of measurement concerns the degree to which a particular measuring procedure gives similar results over a number of repeated trials [26]. Reliability was assessed using the Cronbach alpha reliability coefficient. With the aid of SPSS version 28 the Cronbach alpha reliability coefficient was computed and it was found to be 0.867. Kothari [24] indicated



that any research instrument with a reliability coefficient of 0.7 and above is accepted as being reliable. Since our reliability coefficient was above 0.7, the instruments were considered appropriate for data collection and analysis.

3.7 Pilot Survey

The pilot testing was done in Narok South sub-county, Olololunga wards. The survey was done specifically to ensure that the instruments were reliable and valid also to rule out the weakness in the design of questionnaire and interview guide so as to adjust them according to the study. Mugenda Mugenda [19] indicates that 10% of sample is good for pilot study. Therefore, thirty-eight (38) households were selected using simple random sampling at Olololunga Ward in Narok South Sub County. In order to improve validity, the researcher presented the research tool (questionnaire) to the supervisor and experts in the field of social work, to ascertain that the questions items were valid and reliable. The results on the reliability index was 0.89. According to Kothari [24], a reliability index of more than 0.7 is sufficient for analysis. Thus the tools were considered sufficient for analysis.

3.8. Data Analysis

Data from questionnaires were summarized, edited, coded, tabulated and analyzed. Editing was done to improve the quality of data for coding. Editing involved going through the questionnaires to see if respondents responded to questions

appropriately. The data was analyzed using descriptive statistics of frequencies, means, and percentages and thematic analysis was also used. Statistical Package for Social Sciences (SPSS) version 27 was used as a tool for analyzing the data. Data was presented by the use of charts, frequency tables, and bar charts.

3.10 Ethical Consideration

The major ethical considerations that were encountered in this study are the consent of the respondents, their privacy and confidentiality, anonymity and the researchers' ethical responsibility. Therefore, the researcher ensured that respondents were informed in good time on the purpose of the research, and expected duration and any benefits accrued to them by the study. The researcher sought the approval and license to carry out the study from the NACOSTI. Privacy and confidentiality of the respondents were maintained at all times since the respondents have a right to keep certain information about themselves and their projects from the community.

RESULTS AND DISCUSSION

4.1.1 Response rate

A total of 382 questionnaires were prepared and administered to the respondents at their households. A total of 293 questionnaires were collected back and used for the analysis. The results was presented in table 2.

Table 2: Response rate

	Number of questionnaires	Response rate
Questionnaires	382	100%
Response	293	76.6%
No response	89	23.4%

Source: Survey study (2022)

This accounted for a response rate of 76.6%. A total of 89(23.4%) of the questionnaires were not returned at all by the respondents. The researcher used the 293(76.6%) as a representative of the sample. According to Mugenda and Mugenda (2012) a response rate of 70% and above is considered appropriate for use in the analysis to represent the population parameter. The responses were coded and using SPSS version 27, frequencies and percentages computed for easy interpretation.

4.2 Demographic Data

This section covered the biographical data of the respondents which was organized to cover gender, age bracket and education status. This was an important aspect of the study as it helped to establish the views and perspectives of the various respondents with the given biographic details.

4.2.1 Gender of Respondents

Though this study was on women empowerment programs on their participation in household, men were also given a chance to participate in the key informant interview. 293 questionnaires from women respondents were collected back while 12 interviews from male respondents were also done. The males were included in order to capture their views since the study considered household income.

4.2.2. Age of the respondents

Age is also an important demographic factor that affects the decision-making process of an individual and the entire family. Different age groups examine things differently and therefore to understand women participation in microfinance depends on their age group. The results were presented in figure 2.

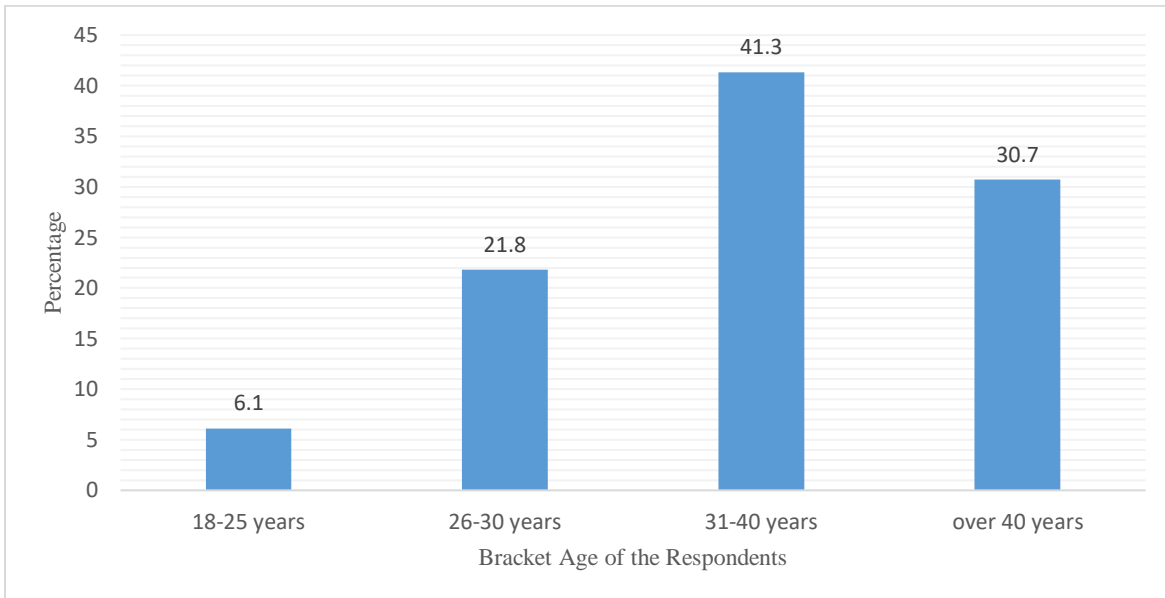


Figure 2: Age of the respondents

Source: Survey study (2022)

The results show that most of the respondent 41.3% were aged between 31-40 years, followed by 30.7% who were aged over 40 years, 21.8% who were aged between 26—30 years and the rest 6.1% were aged between. This implies that most of the respondents were in their early adult hood age and they had families. It was also noted that this age group is the age where most people are taking up family responsibilities hence they need

to be empowered economically in order to take up responsibilities and decision making.

The study also sought to establish the number of years the respondents lived in the area. This was important in assessing their understanding of the different ways of women empowerment in the study area. The results are presented in table 3.

Table 2: Number of Years Resided in The Area

Categories	Frequency	Percent
6-10 years	114	38.9
11-15 years	37	12.6
More than 15 years	142	48.5
Total	293	100.0

Source: Survey study (2022)

The results show that most of the respondents 142(48.5%) had lived in the area for more than 15 years followed by 114(38.9%) which have lived in the area for between 6-10 years while only 37 (12.6%) of the respondents said that they have lived in the area for between 11-15 years. This implies that most of the respondents had been in the areas for a long time and hence were

in a better position to understand how the people lived and the cultural and social aspects of the study area.

The study also sought to find out the highest academic qualification of the respondents. This was important as it has an implication on the decision making at the household level. The result was presented in table 4.

Table 4: Education Level

Category	Frequency	Percent
Not Attended to School	88	30.0
Primary Level	147	50.1
Secondary Level	47	16.0
Above Secondary Level	11	3.7
Total	293	100.0

Source: Survey study (2022)



The results show that most of the respondents 50.1% who participated in the study had primary level of education, 88(30.0%) had primary level of education, 47(16%) were secondary school certificate holders and 11(3.7%) had post-secondary education. This shows that most to the people who participated in the study had good academic qualification and hence were in apposition to provide appropriate information for the study.

4.3 Finding according to the objectives of the study

The study sought to address three specific objectives ; to assess the effect of capacity building programs on the participation of women in household decision making processes in Narok North Sub County.; to establish the extent to which microfinance programs affects the participation of women in household

decision making processes in Narok North Sub – County and to determine the extent to which health care programs affects the participation of women in household decision making processes in Narok North Sub County. The respondents were asked to rate various statement that assisted to assess each objective on a five scale likert. Where; 1-No extent at all,2-Small extent, 3-Neutral, 4-Large extent and 5-Very large extent. The results were presented as follows.

4.3.1 The effect of capacity building programs on the participation of women in household decision making processes

The researcher sought to assess the effect of capacity building programs on the participation of women in household decisions making process. The results were presented in table 5.

Table 5: Effect of Capacity Building Programs

Statement	Small Extent	Neutral	Large Extent	Very Large Extent	Total
Education programs have influenced women decision making at household	18 (6.1%)	55 (18.8%)	96 (32.8%)	124 (42.3%)	293 (100.0%)
I have attended leadership workshops that have helped me in making appropriate decisions	20 (6.8%)	67 (22.9%)	148 (50.5%)	58 (19.8%)	293 (100.0%)
Affirmative action has assisted to empower women and give them more authority in decision making	20 (6.8%)	94 (32.1%)	68 (23.2%)	111 (37.9%)	293 (100.0%)
I have been trained effective on resource mobilization and this has enhanced my ability to make appropriate decisions	24 (8.2%)	114 (38.9%)	97 (33.1%)	58 (19.8%)	293 (100.0%)
Through training I have been equipped with appropriate management skills that have enhanced my decision-making process at the household level	0	63 (21.5%)	147 (50.2%)	83 (28.3%)	293 (100.0%)

Source: Survey study (2022)

The results in the above table show that most of the respondents 124 (42.3%) agreed to a very large extent followed by 96(32.8%) who agreed to a large extent that Education programs have influenced women decision making at the household level. The results also show that 18 (6.1%) and 55(18.8%) agreed to a small extent and others were neutral on the statement. The results implies that women who have attend education programs are in a better position to influence the decision-making process at the household level. This is because they are more informed and can easily participate in decision making process.

The results also show that most of the respondents 148 (50.5%) agreed to a large extent that the women have attended leadership workshops that have helped them in making appropriate house hold decisions. This was followed by 58 (19.8%) who agreed to a very great extent, 67 (22.9%) were neutral while only 20(6.8%) agreed to a small extent about the statement. This implies that the

women who had attended leadership workshop in their capacity building bid were in a better position to participate in household decision making than women who had not attended any leadership forum.

The study also sought to establish the extent to which affirmative action has assisted to empower women and give them more authority in decision making at the house hold level. The results show that 111(37.9%) of the respondents agreed to a very great extent with the statement. This was followed by 94(32.1%) of the respondent who were neutral about that, 68(23.2%) agreed to a large extent and 20(6.8%) agreed to a small extent bout the statement. This implies that the affirmative action has assisted women to effectively participate in decision making at the household level.



The results also shows that most of the women who participated in the study 114 (38.9%) were neutral when asked whether they had been trained effectively on resource mobilization and how it had impacted on their ability to make appropriate decisions at the household level. The results show that 97 (33.1%) agreed to a large extent that they had been trained while 58 (19.8%) agreed to a great extent and the rest 24 (8.2%) agreed to a small extent about the statement. This implies that most omen have not been trained on resource mobilization which is very important in enhancing the ability to make appropriate decisions at the household level.

On whether the women have been equipped with appropriate management skills that have enhanced decision making process at the household level through training, the results show that 147 (50.2%) agreed to large extent, 83 (28.3%) agreed to a very great extent and 63 (21.5%) were neutral about the statement. This implies that most women are able to participate in household

decision making because they have been equipped through training on the various management skills of house hold related activities. This therefore implies that women who have taken capacity building programs are in a better position to participate in household decision making as compared to those who have not taken any capacity building programs.

4.3.2 The extent to which microfinance programs affect the participation of women in household decision making processes

The second objective sought to examine the extent to which microfinance programs affect the participation of women in household decision making process. This objective sought to establish whether wen who participate in microfinance programs are able to effectively participate in household decision making process. The findings of the study were presented on table 6.

Table 6: Effect of microfinance programs on participation of women in house hold decision making process

Statement	Small Extent	Neutral	Large Extent	Very Large Extent	Total
I can access credit through microfinance programs and this has empowered me to make good decisions	0	59 (20.1%)	137 (46.8%)	97 (33.1%)	293 (100.0%)
There are various avenues I can get credit which has assisted me to enhance financial ability	20 (6.8%)	86 (29.4%)	120 (41.0%)	67 (22.9%)	293 (100.0%)
I am able to generate my own income through assistance from the various credit facility programs	42 (14.3%)	35 (11.9%)	152 (51.9%)	64 (21.8%)	293 (100.0%)
Having financial literacy has empowered me to make appropriate decisions at my house hold	0	41 (14.0%)	175 (59.7%)	77 (26.3%)	293 (100.0%)
Improved business performance of MSEs owned by rural and women entrepreneurs	0	69 (23.5%)	148 (50.5%)	76 (25.9%)	293 (100.0%)

Source: Survey study (2022)

The results on whether women can access credit through microfinance programs and the effect it has had on their empowered to make good household decisions show that 137(46.8%) of the respondents agreed to a large extent with the statement 97(33.1%) agreed to a very large extent 59 (20.1%) were neutral about the statement. This implies that access to microfinance credit facilities empowers women to effectively participate in making household decisions.

The results also sought to establish whether there are various avenues women can get credit a how it has assisted theme to enhance financial ability. The results have indicated that most of the respondents 120 (41.0%) agreed to a large extent about the statement, 86(29.4%) were neutral on the statement, 67 (22.9%)

agreed to a very large extent and only 20(6.8%) agreed to a small extent about the statement. This implies that when women have avenues through which they can access credit from microfinance institutions it helps them to effectively participate in decision making at the household level.

The study also sought to find out whether the women are able to generate their own income through assistance from the various credit facility programs. The results show that most of the respondents 152 (51.9%) agreed to large extent, 64 (21.8%) agreed to a large extent, 42 (14.3%) were neutral while 35 (11.9%) agreed to a small extent about the statement. This shows that the ability of women to participate in household decision making process depends on their ability to effectively generate



their own income by being assisted with credit facilities from microfinance programs.

The study also sought to establish whether having financial literacy has empowered women to make appropriate decisions at the household level. The results show that most of the respondents 175(59.7%) agreed to a large extent with the statement, 77 (26.3%) agreed to a very large extent while 41(14.0%) were neutral about the statement. This clearly shows that financial literacy plays an important role in the empowerment of women it has played a role in enhancing their participation in effective household decision making.

On whether improved business performance of MSEs owned by rural women entrepreneurs has had an effect on their ability to effectively participate in household decision making. The result show that 148(50.5%) of the respondents agreed to a large extent

about the statement 76(25.9%) agreed to a very large extent and the rest 69(23.5%) remained neutral on the statement. This implies that through microfinance programs, the women are able to improve the performance of their MSEs and this has had an effect on their participation in household decision making process.

4.3.3 The extent to which health care programs affects the participation of women in household decision making processes

The third objective sought to examine the extent to which health care programs have affected participation of women in household decision making process. The health care programs are important in enhancing the household decision making process among the women as they are the once directly involved in the health issues of the children. The results were presented in table 7.

Table 7: Effect of health care programs on participation of women households' decision making

Statement	Small extent	Neutral	Large extent	Very large extent	Total
I have improved my decision on my hygiene after attending several health programs	21 (7.2%)	63 (21.5%)	116 (39.6%)	93 (31.7%)	293 (100.0%)
I have improved on my personal health since I attended the health care programs	0	39 (13.3%)	144 (49.1%)	110 (37.5%)	293 (100.0%)
My decisions on maternal and child health has been improved after attending the health care programs	0	80 (27.3%)	89 (30.4%)	124 (42.3%)	293 (100.0%)
I am well informed about bio-security since I attended the health care programs	0	92 (31.4%)	91 (31.1%)	110 (37.5%)	293 (100.0%)
Improved business performance of MSEs owned by rural and women entrepreneurs	0	69 (23.5%)	148 (50.5%)	76 (25.9%)	293 (100.0%)

Source: Survey study (2022)

On whether health care programs for women have assisted them to improved their health care decision at the household level, the results have shown that most of the respondents 116(39.6%) agreed to a large extent, 93(31.7%) agreed to a very large extent and 63(21.5%) were neutral while 21(7.2%) agreed to a small extent about the statement. This implies that women who have attended or have access to health care programs are in a better position to effectively participate in household decision making process than those who have not accessed the health care programs.

On whether women have improved their personal health since they attended health care programs. The results show that most of the respondents 144(49.1%) agree to a large extent about the

statement 110(37.5%) agreed to very large extent and only 39(13.3%) remained neutral on the same. This shows that when women participate in health care programs, they are more informed and hence stand a better position to effectively participate in household decision especially concerning health care.

The results also indicated that 124(42.3%) of the respondents followed by 89(30.4%) agreed to very large extent and a large extent that the decisions women make on maternal and child health has been improved after attending the health care programs. Only 80(27.3%) were neutral on the statement. This implies that women who participate in various health care programs are in better position to make appropriate decision



regarding to maternal and child health care as compared to women who have no access to these programs.

The results further sought to assess whether women are well informed about bio-security since they attended health care programs. The results show that a good percentage of the respondent 110(37.5%) agreed to very great extent with the statement. While only 92(31.4%) were neutral and 91(31.1%) agreed to a large extent with the statement. This implies that women decision making process has improved following their participation in various health related programs such as bio security through which they gain much knowledge on issues of health.

On whether women who have undertaken effective reproductive health programs have been able to make very appropriate decisions at the family level, 121(41.3%) of the respondents

agreed to a great extent, 106(36.2%) agreed to a large extent while 45 (15.4%) were neutral and 21(7.2%) agreed to a small extent. This implies that women who have by any chance participated in health care programs have a better chance of participating in household decision making regarding health.

4.3.4 Women in household decision making process

The dependent variable of the study was to find out the areas of women participation in household decision making process. The researcher sought to assess whether there has been improved in different areas of women decision making such as education of their children, improved performance of their business and improved health care and wellbeing of the family. This is presented in table 8.

Table 8: Response on views on household decision making process

Statement	Small extent	Neutral	Large extent	Very large extent	Total
Increased transformation of MSEs from the informal to the formal sector	0	65 (22.2%)	179 (61.1%)	49 (16.7%)	293 (100.0%)
Increased number of start-ups, and thereby attaining	28 (9.6%)	38 (13.0%)	178 (60.8%)	49 (16.7%)	293 (100.0%)
Increased income and employment opportunities in rural areas, particularly for women	52 (17.7%)	85 (29.0%)	131 (44.7%)	25 (8.5%)	293 (100.0%)
Improved household welfare	0	38 (13.0%)	230 (78.5%)	25 (8.5%)	293 (100.0%)

Source: Survey study (2022)

The study sought to assess whether there has been improved transformation of women owned businesses to more formal organizations because they have received training and are able to access microcredit facilities. The response shows that most of the respondents 179(61.1%) agreed to a large extent with the statement, 49(16.7%) agreed to a very large extent while only 65(22.2%) remain neutral on the statement. This shows that most respondents who participated in the study felt that women who have attended capacity building and can access micro credit facilities are in a better position to make decisions of improving their businesses and hence improving their household decisions.

The study also sought to establish how women have been enabled to participate in household decision making and it was noted that with improved capacity building, access to credit and improved decision making in health matters. The results show that majority of the respondents 178(60.8%) agreed to a large extent 49(16.7%) agreed to a very large extent with the statement that there is increased number of business startup among the women with the aim of improved income hence improved participation in house

hold decision making. While only 28(9.6%) remained neutral on the issue and 38(13.0%) agreed to a less extent about the statement. This implies that there has been an increase in the number of business startups among women following their participation in household decision making.

The results also noted that there has been an increase in income and employment opportunities in rural areas, particularly among women. The results show that 131(44.7%) of the respondents agreed to a large extent with the statement and 52(17.7%) agreed to a less extent about the statement. This implies that women participation in decision making affects the level of income and employment opportunities in the society.

The study also noted that there has been improved household welfare following women participation in household decision making. The results indicated that majority of the respondents, 230(78.5%) agreed to a large extent with the statement 38(13.0%) were neutral about the statement and only 25(8.5%) agreed to a very large extent with the statement.



4.4 Thematic analysis

This section gives the findings from the interviews that were conducted among the key informants who were selected among the women. On capacity building the women were required to indicate whether their education level has influenced their participation in decision making, and whether they have attended any leadership seminars and workshops and how they have influenced their level of participation in household decision making. Literature has it on record that most women who have low education level have little to contribute to their household decision making process. The purpose of this study was to find out whether the respondents agreed with these findings from other studies. The responses obtained have indicated that most women lack education, and this affects their participation in decision making to a large extent. Among the respondents one Assistant Chief Coded as **ASC001** had these to say;

"In our community our culture denied women the chance to effectively attend school and have a good education. This has greatly impacted negatively the ability of women to participate in decision pertaining their lives and that of their families. They are left behind in all things happening around them and we feel that they have missed on the most critical thing which is education. Education supposed to help one gain understanding of what is happening around her. From my own experience most Maasai women lack the voice in their families simply because they don't have an understanding of the most basic things such as nutrition, family budget plan".

This implies that men acknowledge women education in Maasai community but culture has remain obstacle. However from the above statement Women who are informed are more likely to effectively participate in making decision at the household level such as what type of food to be consume by the family and budget for the cost.

Another Chief Coded as **CH002**;

"...culturally women in Maasai land have very little to contribute to the decision-making process at the household level. This has limited their ability to effectively take charge of appropriate actions at the family level. This has affected their knowledge capacity because girl child education is not taken as seriously as of the boy child. Decisions involving income and job opportunities are made by men and also matters of health. From my personal opinion women are not given a chance to effectively contribute to the well-being of the household".

On the above statement shows women are always left behind in making very important decision worse of it in the, Maasai community where women are considered with low esteem compared to male, hence most of the key decision on income health, employment we leave it to the male who seem to be more informed about the same. Women's health is complex yet they leave it to the male to make decision for them pertaining to the issues of health.

However the above statement reveal that for women to gain control and challenge the ideology of patriarch and discrimination, equal education opportunity should be given to girl child as that of a boy child.

On whether they have attended leadership seminars or workshops to build their capacity to participate in decision making at the household level, the male respondents were asked to indicate whether women have attended any of these leadership seminars and whether the seminars have been of any effect on them at the household level. From the respondents point of view the main theme that was drawn from their responses was that majority of the women had not attended the leadership seminars and workshops. **CH003** said that;

"Personally, I have not seen women attending any leadership seminar or workshop to learn anything pertaining to the household. They learn of leadership meeting in the church but the purpose is not to sensitize women on family decision making. I believe that there is need to have these meetings because failure to hold them gives rise to of lack of information. In most cases even simple family decisions are very difficult for women to make for example designing family menu. Attending these seminars and workshops might help them become aware on what is affecting women in the society".

The current study established that most women did have an idea about affirmative action. To them the issue of equal rights was not that important especially given that they are there in the villages where the culture is strong and require women to remain submissive. Although this might be seen as a high level of intimidation of the women as they remain voiceless in making decision at the household level.

The researcher also sought to examine whether women accessed credit facilities and how these facilities have influenced their income level and created jobs for them. Access to credit is considered as a way of ensuring that the women have a basis for making appropriate decision at the household level. Themes collected from the interview guides have indicated that the economic empowerment of women will depend on their income level and also their ability to grow their existing businesses or start new ones. [13] Shows that women access to credit facilities has an effect on their ability to grow their business, earn an income and hence help to improve the well-being of their families.

ASC004 indicated;

"Most women joined a women group in our community where they. They have been getting financial support from microfinance institution which have helped them to start businesses which are empowering them economically. In this groups I can say that women have been able to increase their stocks and hence improve on their profits. They have also been able to employ other women and help them earn a living".

In another caption **CH005** affirmed that;



“A major drawback in decision making to the household level is the access to credit facilities. Credit facilities have relied boosted the role of women in the society not just as house wives but as people who help to make informed decision on matters pertaining to children’s education and health. I therefore encourage women to join the credit institutions that support the work of women and hence be able to enhance their decision-making process”.

From these captions it is important to note that women are unable to effectively participate in the household decision making process because of their limited financial ability and those has affected even their ability to make personal decision involving finances career and health matters for the family.

4.5 Discussion of the Findings

This sub-section discusses the research findings.

4.5.1 Capacity Building Programs on Participation of Women in Household Decision Making Processes

The results of the show that most of the respondents agreed that Education programs have influenced women decision making at the household level. The results implies that women who have attend education programs are in a better position to influence the decision-making process at the household level. This is because they are more informed and can easily participate in decision making process. The research agrees with [13] who indicated that education in married women increases their decision-making power at homes of nuclear families in New York. The results also show that most of the respondents agreed to a large extent that the women have attended leadership workshops that have helped them in making appropriate house hold decisions. The results also agree with Oyelude and Bamigbola [28] who found out that the NGOs were discovered to be slowly but steadily gaining ground in educating the women and creating awareness among them through workshops thus empowering them hence making them participate in decision making.

The respondents also agreed to a very great extent with the statement that the affirmative action has assisted women to effectively participate in decision making at the household level. The results show that most of the respondents agreed to a large extent that they had been trained. This implies that most women have not been trained on resource mobilization which is very important in enhancing the ability to make appropriate decisions at the household level.

4.5.2 Effect of microfinance programs on participation of women in house hold decision making process

Most of the respondents agreed that women can access credit through microfinance programs and the effect it has had on their empowered to make good household decisions. This implies that access to microfinance credit facilities empowers women to effectively participate in making household decisions. Most of the respondents agreed that there are various avenues women can get credit, a how it has assisted theme to enhance financial ability. This implies that when women have avenues through which they

can access credit from microfinance institutions it helps them to effectively participate in decision making at the household level. The results agree with [29] who examined whether the South African government and its corporate organizations have been successful in employing women as professional equals by utilizing them fully in senior and top management positions after equal opportunity and affirmative action legislation was introduced by the democratic government the study found out that microfinance services act as a key fulcrum to women entrepreneurs' economic empowerment.

Most of the respondents agreed that women are able to generate their own income through assistance from the various credit facility programs. This shows that the ability of women to participate in household decision making process depends on their ability to effectively generate their own income by being assisted with credit facilities from microfinance programs. Most of the respondents agreed that having financial literacy has empowered women to make appropriate decisions at the household level. This clearly shows that financial literacy plays an important role in the empowerment of women it has played a role in enhancing their participation in effective household decision making. The study converges with Al-Shami [30] examined whether the access to credit affects several aspects of empowerment in urban Malaysia and the result showed that the access to microcredit affects positively women’s monthly income.

The findings indicated that most of the respondents improved business performance of MSEs owned by rural women entrepreneurs has had an effect on their ability to effectively participate in household decision making. This implies that through microfinance programs, the women are able to improve the performance of their MSEs and this has had an effect on their participation in household decision making process.

4.5.3 The extent to which health care programs affects the participation of women in household decision making processes

Most of the respondents agreed that health care programs for women have assisted them to improve their health care decision at the household. This implies that women who have attended or have access to health care programs are in a better position to effectively participate in household decision making process than those who have not accessed the health care programs. Also, most of the respondents agreed that women have improved their personal health since they attended health care programs. This shows that when women participate in health care programs, they are more informed and hence stand a better position to effectively participate in household decision especially concerning health care. This study agrees with [31], women’s power relative to that of their husbands in 23 Sub-Saharan African countries to determine how it affects women’s health, reproductive outcomes, children’s health and children’s education. The results show the conceptual and analytical value of intra-household contention



over decision-making and expand the breadth of evidence on the importance of women's power for economic development.

Most of the respondents agreed that the decisions women make on maternal and child health has been improved after attending the health care programs. This implies that women who participate in various health care programs are in better position to make appropriate decision regarding to maternal and child health care as compared to women who have no access to these programs.

Most of the respondents indicated that women are well informed about bio-security since they attended health care programs. This implies that women decision making process has improved following their participation in various health related programs such as bio security through which they gain much knowledge on issues of health. Most of the respondents indicated that women had undertaken effective reproductive health programs have been able to make very appropriate decisions at the family level, this implies that women who have by any chance participated in health care programs have a better chance of participating in household decision making regarding health. This study agrees with Agatha, [32] describes women's strength from the point of their weakness to different sorts of abuse. He conceives that it is important to enable ladies socially so by splitting them from male control and claim uniformity with them. Health is another essential factor for accomplishing complete advancement of people.

Conclusions

The focus of the study was to evaluate how women's empowerment initiatives affected their participation in household decision-making. By giving them access to crucial knowledge and information, it was discovered that capacity-building programs greatly enhanced the involvement of women in decision-making. In the exact same way, microfinance lending programs increased women's income and opened doors to employment, giving them more influence over home decisions and contributing to women's empowerment. Health programs were also found to be essential for enabling women to successfully engage in decisions pertaining to their health. Generally, the study found that by providing women with the tools and information they need, programs that promote women's empowerment (such as capacity building, financial access, and health initiatives) help elevate the participation of women in household decision-making.

Competing Interest

The authors have no competing interests to declare that are relevant to the context of this article.

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Data Availability Statement

All the data used in this work are within the manuscript and any supplementary files provided. Any further data will be provided upon request.

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COGNITIVE CHALLENGES AND PROFESSIONAL IMPLICATIONS OF PREGNANCY BRAIN IN ACADEMIA: A REVIEW OF PHYSIOLOGICAL AND PSYCHOLOGICAL BASES AND POTENTIAL INTERVENTIONS

Goddidit Esiro Enoyoze^{1*} Marian Jegbefumere Osemwegie¹

¹Department of Biological Sciences, Faculty of Science, Edo State University Uzairue, Edo State, Nigeria

*Corresponding Author

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ABSTRACT

Pregnancy brain, characterized by cognitive changes during pregnancy, has significant implications for women in academia, affecting professional performance and career progression. In this review, we focus on the physiological and psychological bases of pregnancy brain, its impacts on cognitive functions, and potential interventions for pregnant women. The objective of this review is to explore the phenomenon of pregnancy-induced cognitive decline, focusing on its physiological, psychological, and cognitive bases, and its potential impact on cognitive function. The impact of pregnancy on cognitive performance, career progression, and professional performance can be mitigated through increased awareness, research, and institutional support. By recognizing and addressing the cognitive challenges faced by pregnant women, academic institutions can foster a more inclusive and supportive environment, ultimately benefiting the professional and personal well-being of women in academic institutions.

KEYWORDS: Pregnancy brain; Cognitive function; Women in academia; Professional performance; Institutional support

INTRODUCTION

Pregnancy brain, also known as mommy brain or "momnesia," refers to the cognitive changes that many women experience during pregnancy and postpartum. These changes often involve memory lapses and difficulty in concentrating, and they are commonly attributed to the hormonal fluctuations that occur during pregnancy. Although the term is colloquial, scientific studies have substantiated the existence of cognitive alterations during pregnancy, noting that they can affect daily functioning and productivity.

Research suggests that the significant hormonal changes, particularly increases in estrogen and progesterone, can influence brain function. These hormones can affect neurotransmitter systems and brain structures such as the hippocampus, which is essential for memory formation and retrieval. Additionally, studies using neuroimaging techniques have observed changes in brain morphology during pregnancy, further supporting the concept of pregnancy brain (Oatridge et al., 2002; Hoekzema et al., 2017).

The objective of this review is to explore the phenomenon of pregnancy brain, focusing on its physiological and psychological

bases, impacts on cognitive functions, and potential interventions for women in academia.

Understanding Pregnancy Brain

Research indicates that pregnancy is associated with significant hormonal changes that can affect cognitive function. A meta-analysis by Henry and Rendell (2007) found that pregnant women experience mild but statistically significant impairments in memory performance. Similarly, a study by Glynn (2010) highlighted that pregnant women often report subjective experiences of cognitive decline, even if objective measures do not always detect significant changes. These findings suggest a complex interplay between hormonal changes and cognitive function.

Physiological and Psychological Basis of Pregnancy Brain a. Hormonal Changes During Pregnancy

During pregnancy, significant hormonal changes occur, particularly in levels of progesterone and estrogen, which can affect cognitive function. Progesterone, which increases considerably during pregnancy, has been linked to mood regulation and cognitive processes. High levels of progesterone can induce sedative effects and influence neurotransmitter systems, potentially leading to cognitive symptoms such as



forgetfulness and difficulty concentrating (Henry & Rendell, 2007).

Estrogen, another hormone that rises during pregnancy, plays a crucial role in brain function. It has neuroprotective properties and influences synaptic plasticity, neurotransmission, and blood flow in the brain. However, the fluctuations in estrogen levels during pregnancy can impact these processes, leading to changes in memory and attention. Estrogen's effects on the hippocampus, a brain region critical for memory formation and retrieval, are particularly notable, as structural changes in the hippocampus have been observed during pregnancy (Oatridge et al., 2002; Glynn, 2010).

b. Neurological Changes and Brain Plasticity

Pregnancy induces notable structural and functional changes in the brain, a phenomenon often referred to as brain plasticity. Neuroimaging studies have shown that pregnancy leads to reductions in gray matter volume in specific brain regions, including those involved in social cognition and memory, such as the prefrontal cortex and the hippocampus. These changes are thought to facilitate maternal behaviors and prepare the brain for the demands of motherhood (Hoekzema et al., 2017).

These structural changes are accompanied by functional changes in brain activity. For example, alterations in resting-state connectivity and increased activity in brain regions associated with emotional regulation and social processing have been observed. These changes suggest that the brain adapts to the physiological and psychological demands of pregnancy, which may contribute to the cognitive symptoms experienced by many pregnant women (Kim et al., 2010).

c. Psychological Factors

Psychological factors such as stress, anxiety, and sleep disturbances are common during pregnancy and can significantly impact cognitive function. High levels of stress and anxiety can affect cognitive processes by impairing attention, memory, and executive function. These effects are mediated through the release of stress hormones such as cortisol, which can disrupt the functioning of the prefrontal cortex and hippocampus (Van den Bergh et al., 2005).

Sleep disturbances, which are prevalent during pregnancy due to hormonal changes, physical discomfort, and anxiety, can further exacerbate cognitive difficulties. Poor sleep quality and sleep deprivation are associated with impairments in attention, memory consolidation, and executive function. These sleep-related cognitive deficits can compound the effects of pregnancy brain, making it challenging for pregnant women to maintain their usual cognitive performance (Mindell & Jacobson, 2000).

Impact of Mental Health on Cognitive Performance

Mental health plays a crucial role in cognitive performance during pregnancy. Conditions such as depression and anxiety can have a profound impact on cognitive function, affecting memory,

attention, and decision-making abilities. Depression during pregnancy is associated with difficulties in concentration and memory, which can interfere with daily activities and professional responsibilities (Bannbers et al., 2013).

Addressing mental health issues through interventions such as counseling, cognitive-behavioral therapy, and mindfulness practices can help mitigate their impact on cognitive function. By improving mental health and managing stress and anxiety, pregnant women can better cope with the cognitive changes associated with pregnancy brain (Field et al., 2010).

Common Symptoms

Pregnancy brain is typically characterized by a range of cognitive symptoms. The most commonly reported symptoms include:

1. **Forgetfulness:** Pregnant women often report an increase in forgetfulness, such as misplacing items, forgetting appointments, or struggling to recall recent conversations (Crawley et al., 2003).
2. **Difficulty Concentrating:** Many women experience challenges in maintaining focus on tasks, particularly those that require sustained attention or complex problem-solving. This can impact both personal and professional responsibilities (Brett & Baxendale, 2001).
3. **Mental Fog:** A general sense of mental foggy or clouded thinking is another common symptom, where tasks that were previously easy may seem more challenging (Henry & Rendell, 2007).
4. **Slower Cognitive Processing:** Some studies have noted that pregnant women may experience slower cognitive processing speeds, affecting their ability to quickly understand and react to information (Davies et al., 2005).

These symptoms can vary in severity and duration, often peaking during the third trimester when hormonal changes are most pronounced. For many women, these cognitive changes are temporary and tend to resolve postpartum (Buckwalter et al., 1999).

Impact on Cognitive Functions

A. Memory and Information Retention

Pregnancy brain, characterized by cognitive changes during pregnancy, notably affects different types of memory. Working memory, which involves holding and manipulating information over short periods, is particularly vulnerable. Studies have shown that pregnant women often experience a decline in working memory capacity, leading to difficulties in tasks that require maintaining and updating information (Buckwalter et al., 1999).

Short-term memory, responsible for storing information for brief durations, is also affected. Pregnant women may find it challenging to recall recent events or instructions, impacting daily activities and professional responsibilities. These memory changes are attributed to hormonal fluctuations, particularly increased levels of progesterone and estrogen, which influence neurotransmitter systems and brain regions involved in memory processes (Henry & Rendell, 2007).



Empirical research has documented memory changes in pregnant women through various cognitive assessments. For instance, a study by Brett and Baxendale (2001) found that pregnant women performed worse on tasks involving verbal memory and visual-spatial memory compared to non-pregnant women. Another study by Henry and Rendell (2007) demonstrated significant impairments in prospective memory, which involves remembering to perform planned actions.

Research by Cuttler et al. (2010) examined the effects of pregnancy on different types of memory using a range of cognitive tests. Their findings indicated that pregnant women exhibited notable deficits in both working memory and episodic memory, which is responsible for recalling specific events or experiences. These studies highlight the pervasive impact of pregnancy on various memory domains, contributing to the overall experience of pregnancy brain.

b. Attention and Concentration

Pregnant women often report difficulties in sustaining attention and managing multiple tasks simultaneously. These attentional deficits can manifest as increased distractibility, prolonged response times, and a reduced ability to focus on complex tasks. Hormonal changes, particularly fluctuations in estrogen and progesterone, are believed to disrupt neural circuits involved in attention regulation, leading to these cognitive challenges (Poser et al., 1986).

Multitasking, which requires the simultaneous management of several cognitive processes, is particularly challenging during pregnancy. Pregnant women may struggle to juggle professional duties, household tasks, and other responsibilities, leading to decreased efficiency and increased stress. These difficulties are exacerbated by the physical and emotional demands of pregnancy, further impacting cognitive performance (de Groot et al., 2006).

Evidence from cognitive tests and self-reported data supports the notion of impaired attention and concentration during pregnancy. In a study by Christensen et al. (2010), pregnant women showed decreased performance on tasks requiring sustained attention and rapid information processing compared to non-pregnant controls. Self-reported data from pregnant women also indicate increased difficulties with concentration and a heightened sense of mental fatigue.

Further research by Crawley et al. (2003) utilized a battery of cognitive tests to assess attentional capacities in pregnant women. Their findings revealed significant impairments in selective attention and divided attention, supporting the notion that pregnancy brain affects the ability to filter and prioritize information effectively. These studies provide robust evidence for the attentional challenges experienced by pregnant women.

c. Executive Functioning

Executive functioning, which encompasses higher-order cognitive processes such as planning, decision-making, and problem-solving, is also impacted by pregnancy brain. Pregnant women may experience difficulties in organizing tasks, making complex decisions, and solving problems efficiently. These challenges can be attributed to hormonal influences on the prefrontal cortex, a brain region critical for executive functions (Henry & Rendell, 2007).

Research suggests that hormonal changes during pregnancy, particularly elevated levels of progesterone, can impair the cognitive flexibility and inhibitory control required for effective executive functioning. This can result in increased indecisiveness, difficulty adapting to new information, and challenges in managing goal-directed behavior. These effects on executive functioning can impact both personal and professional aspects of a pregnant woman's life (Buckwalter et al., 1999).

Empirical research has documented changes in executive function during pregnancy through various cognitive assessments. A study by Keenan et al. (1998) found that pregnant women exhibited deficits in tasks requiring cognitive flexibility and inhibitory control, such as the Stroop test and the Wisconsin Card Sorting Test. These findings suggest that pregnancy brain can impair the ability to switch between tasks and inhibit automatic responses.

Another study by De Groot et al. (2006) assessed the impact of pregnancy on decision-making and problem-solving abilities. Their results indicated that pregnant women had difficulties in tasks requiring strategic planning and complex problem-solving, further supporting the notion of impaired executive functioning during pregnancy. These research findings underscore the broad impact of pregnancy brain on various cognitive domains.

Importance of Studying Pregnancy Brain in Academia

Studying pregnancy brain is crucial in academia due to its potential impact on professional performance and career progression. Academia demands high levels of cognitive function, including memory, concentration, attention to details and executive functioning, which are often affected by pregnancy brain. Women experiencing cognitive changes during pregnancy may find it challenging to maintain their usual level of productivity, which can influence their teaching, research, and administrative duties (Cuddy et al., 2014).

Anecdotal evidence from academic women provides insight into the real-world impact of pregnancy brain. Many report challenges in meeting deadlines, maintaining focus during lectures, and keeping up with research demands. These narratives highlight the need for a supportive academic environment that recognizes and accommodates the cognitive changes associated with pregnancy.

- **Teaching Responsibilities:** Cognitive impairments such as forgetfulness and difficulty concentrating can affect classroom performance, including lecture delivery and student interactions. These challenges can diminish the



quality of teaching and student engagement, impacting evaluations and career advancement opportunities (Lester & Sallee, 2009).

- **Research Productivity:** Research productivity, a key factor in academic career progression, can be significantly hindered. The need for sustained focus and complex problem-solving in research can be significantly affected by pregnancy brain. Delays in research projects, decreased productivity, and challenges in writing and grant applications can hinder academic progress and career growth (Mason & Goulden, 2004). These delays can impact publication rates and the ability to secure funding, crucial metrics for tenure and promotion (Mason et al., 2013). Moreover, the high expectations and pressures of academia can exacerbate the stress and anxiety associated with pregnancy brain, further affecting performance (Gonzales & Fiorentino, 2010).
- **Administrative Duties:** Academic roles often involve substantial administrative responsibilities, including committee work and leadership positions. Pregnancy brain can impair the ability to manage these tasks effectively, impacting decision-making processes and overall institutional functioning (Ward & Wolf-Wendel, 2012).
- **Work-Life Balance:** Balancing the demands of pregnancy with academic responsibilities can be particularly challenging. The pressure to maintain high productivity levels while managing pregnancy-related cognitive and physical changes can lead to burnout and decreased job satisfaction (Gonzales & Fiorentino, 2010).

The academic environment often lacks adequate support systems and policies to accommodate the cognitive and physical demands of pregnancy and childbirth. This lack of support can lead to increased stress and difficulty balancing professional and personal responsibilities (Ward & Wolf-Wendel, 2012).

By recognizing the specific needs of pregnant women in academia, institutions can develop targeted policies and support systems to help mitigate these impacts, promoting a more inclusive and supportive academic environment.

The cognitive challenges posed by pregnancy brain can affect women's career progression in academia. Perceptions of reduced productivity may contribute to biases against pregnant women and new mothers, affecting their opportunities for advancement and recognition. This bias can exacerbate existing gender disparities in academic leadership and tenure-track positions.

Potential Interventions and Coping Strategies

To address the impact of pregnancy brain on academic productivity, institutions can implement supportive policies, mentorship programs, peer support networks and access to cognitive and mental health resources.

a. Cognitive Training and Mental Exercises

Cognitive training and mental exercises can be effective in mitigating the cognitive challenges associated with pregnancy

brain. Techniques such as mnemonic devices, chunking, and visualization can help improve memory retention and recall. For instance, mnemonic devices create associations that make information easier to remember, while chunking involves breaking down large pieces of information into smaller, more manageable units (Borella et al., 2010). Visualization, on the other hand, enhances memory by creating mental images of the information to be remembered, making abstract concepts more concrete (Richardson, 2011).

Mindfulness practices and meditation can also enhance concentration and cognitive flexibility. Mindfulness exercises, such as focused breathing and mindful observation, help in maintaining attention and reducing stress, which can otherwise exacerbate cognitive difficulties (Zeidan et al., 2010). Regular practice of these techniques can lead to improvements in working memory and executive function, which are often impaired during pregnancy (Jha et al., 2007).

Cognitive rehabilitation programs, which are structured interventions designed to improve cognitive function, have shown promise in addressing cognitive deficits. These programs typically involve a series of targeted exercises aimed at enhancing specific cognitive skills, such as memory, attention, and problem-solving. Studies have demonstrated that cognitive rehabilitation can lead to significant improvements in cognitive performance in various populations, including those experiencing cognitive decline due to aging or neurological conditions (Clare & Woods, 2004).

For pregnant women, tailored cognitive rehabilitation programs could provide structured support to manage pregnancy brain. Such programs might include memory training exercises, attention enhancement tasks, and problem-solving activities, all designed to fit the specific cognitive challenges faced during pregnancy and beyond. Research suggests that engaging in these programs can result in measurable improvements in cognitive function, which can help mitigate the impact of pregnancy brain on academic performance (Willis et al., 2006).

a. Organizational and Institutional Policies

Academic institutions can play a crucial role in supporting pregnant women by implementing best practices and policies that address their unique needs. Best practices include offering flexible work arrangements, such as adjustable schedules and telecommuting options, which can help pregnant women manage their cognitive and physical challenges more effectively (Drago et al., 2005). Providing access to maternity leave and ensuring that policies are clearly communicated and easily accessible can also reduce stress and allow for better planning and adaptation to pregnancy-related changes (Sallee, 2008).

Institutions should also consider creating dedicated support programs for pregnant and parenting academics. These programs might include peer support groups, mentorship opportunities, and workshops on managing work-life balance. Such initiatives can



foster a supportive community and provide practical advice and emotional support, helping pregnant academics navigate their professional responsibilities more effectively (Ward & Wolf-Wendel, 2012).

To better support pregnant women in academia, institutions should consider several key policy changes and accommodations. These might include:

- i. **Extended and Paid Maternity Leave:** Ensuring that maternity leave is both extended and fully paid can provide significant relief for pregnant academics, allowing them to recover and adapt to their new roles without financial strain (Mason & Goulden, 2004).
- ii. **Flexible Scheduling and Remote Work Options:** Allowing for flexible scheduling and remote work can help accommodate the cognitive and physical needs of pregnant women, enabling them to maintain productivity while managing pregnancy-related symptoms (Drago et al., 2005). Allowing pregnant academics to adjust their work hours to accommodate medical appointments and manage fatigue.
- iii. **On-Campus Childcare Services:** Providing access to affordable, on-campus childcare can reduce the stress associated with balancing parenting and academic responsibilities, helping women return to work more smoothly (Ward & Wolf-Wendel, 2012).
- iv. **Supportive Mentorship Programs:** Establishing mentorship programs that pair pregnant academics with experienced mentors who have navigated similar challenges can provide guidance, support, and practical advice (Lester & Sallee, 2009). Offering programs focused on mental and physical health, such as prenatal exercises or counseling services (Mason et al., 2013).

b. Personal and Professional Strategies

i. Time Management and Self-Care Tips

Effective time management and self-care are essential for coping with pregnancy brain. Pregnant women can benefit from strategies such as:

- **Prioritize Tasks:** Focus on high-priority tasks and break them into manageable steps to avoid feeling overwhelmed.
- **Use Technology:** Utilize digital tools such as calendars, reminders, to-do lists, task management apps and organizational tools (Macan et al., 1990), to keep track of important responsibilities, deadlines and appointments.
- **Take Breaks:** Regular breaks can help maintain focus and prevent burnout.
- **Healthy Lifestyle:** Maintain a healthy diet, exercise regularly, and ensure adequate sleep to support cognitive function (Gonzales & Fiorentino, 2010). This can also help maintain energy levels (Michie, 2002).

ii. Building a Supportive Network and Seeking Professional Help

Building a supportive network is crucial for managing the challenges of pregnancy brain. Pregnant women should seek support from colleagues, friends, and family members who can provide emotional and practical assistance. Additionally, professional help, such as counseling or coaching, can offer tailored strategies to cope with cognitive changes and stress. Peer support groups, both within and outside academic institutions, can also provide a sense of community and shared experience (Lester & Sallee, 2009).

Future Research Directions

Despite significant advances in understanding pregnancy brain, several gaps and conflicting findings remain. One major area with limited research is the long-term impact of pregnancy-related cognitive changes. Most studies focus on short-term effects, often neglecting how these changes might persist or evolve postpartum. Additionally, there is a lack of consensus on the extent and nature of cognitive deficits during pregnancy, with some studies reporting significant impairments while others find minimal or no effects (Henry & Rendell, 2007).

Another gap is the diversity of study populations. Much of the existing research has been conducted on relatively homogeneous samples, often from Western, educated, industrialized, rich, and democratic societies. This lack of diversity limits the generalizability of findings across different cultural, socioeconomic, and geographical contexts (Arnett, 2008).

To address these gaps, future research should adopt more rigorous and comprehensive methodologies. Longitudinal studies that follow women from pre-pregnancy through postpartum would provide valuable insights into the temporal dynamics of pregnancy brain. Additionally, employing larger and more diverse samples would enhance the generalizability of results.

Standardizing cognitive assessments and ensuring their ecological validity is crucial. Using a combination of neuropsychological tests, self-reported measures, and real-world tasks can provide a more holistic understanding of cognitive changes during pregnancy. Incorporating neuroimaging techniques, such as functional MRI, can also elucidate the neural underpinnings of these changes (Hoekzema et al., 2017).

Integrating insights from neuroscience, psychology, and education can foster a more comprehensive understanding of pregnancy brain. Neuroscience can elucidate the biological mechanisms underlying cognitive changes, while psychology can provide context regarding emotional and behavioral aspects. Education can offer practical strategies for supporting pregnant women in academic settings.

Interdisciplinary collaborations can also enhance methodological approaches. For instance, combining neuroimaging with psychological assessments can link structural and functional brain



changes to specific cognitive outcomes. Similarly, educational research can inform interventions and policy recommendations to support pregnant women in academia (Kim et al., 2010).

CONCLUSION AND RECOMMENDATIONS

Pregnancy brain has significant implications for women in academia, affecting professional performance and career progression. The cognitive challenges associated with pregnancy can hinder productivity, complicate multitasking, and impact decision-making, thereby affecting academic responsibilities and career development. Addressing these challenges is essential for promoting gender equality and supporting the professional growth of women in academia.

Increased awareness, research, and institutional support are crucial for mitigating the effects of pregnancy brain. Institutions should implement supportive policies and practices, such as flexible work arrangements, extended paid maternity leave, and access to mental health resources. Researchers should continue to investigate the cognitive changes associated with pregnancy, employing rigorous methodologies and interdisciplinary approaches to enhance understanding and develop effective interventions.

By acknowledging and addressing the cognitive challenges faced by pregnant women, academic institutions can foster a more inclusive and supportive environment, ultimately benefiting the professional and personal well-being of women in academia.

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SELF-CONCEPT OF COLLEGE STUDENTS: A CRITICAL ANALYSIS

Mr. R. Rajkumar¹, Dr. S. Ramprabhu², Dr. P. Malar Selvi¹, & Mr. A. Kesavan¹

¹ Assistant Professors, Kaamadhenu College of Education, Sathyamangalam, Erode DT

² Principal, Kaamadhenu College of Education, Sathyamangalam, Erode DT

ABSTRACT

Self-concept is our perception of our ability and our uniqueness. Self-concept is very general and changeable, as we grow older the self-perception becomes much more organized detailed, and specific. It is a collection of beliefs about one's nature, unique qualities, and typical behaviour. It is the ability to interact with others, to meet basic needs, awareness of emotional states, feelings about looks, health, physical condition and overall appearance, success or failure. The main objective of this study is to analyze the self-concept of college students. The investigator used the survey method and selected the sample using random sampling techniques. In this study, 395 college students from government, private, and government-aided colleges in the Erode district were selected as a sample. The findings of the study indicate that there was no significant difference between Male and Female college students. It is also inferred that both Male and Female college students are homogeneous in Self-concept. There was no significant difference between Government college and private college students. It is also inferred that type of institution and kind of institutions do not influence the self-concept of college students.

KEYWORDS: Ability, College Students, Critical Analysis, Emotions, Self-concept, Type of Institutions

INTRODUCTION

Education is a form of learning in which the knowledge, skills, and habits of a group of people are transferred from one generation to the next through teaching, training, or research. Present-day education has no definite goal to pursue; education should not be for stuffing some facts into the brain but should aim at reforming the human mind. Education has a two-fold function in society. On the one hand, it should discipline the mind for sustained and persistent speculation. On the other hand, it should integrate human life around central, focusing ideals. It is a tragedy that the latter is often neglected in our educational system. Education should equip us with the power to think effectively and objectively. To think is one of the hardest things in the world, and to think objectively is still harder. Yet this is the job of education.

Self-concept was consistently found to be a predictor of happiness and life Satisfaction. People with low Self-concept are not that happy, not that adventurous in nature, and not at all confident enough and they mostly give up rather than try harder while facing a difficult challenge. It also has a role as a buffer against stress and anxiety caused by life Experience. A feeling of Self-Worth, when the self assesses itself, it asks people for straightforward ratings of how they feel about themselves. Classroom misfortunes conflicts with peers and failures can make college a breeding ground for self-esteem issues. Many college students find the pressure of making new friends and struggling for acceptance while handling a more advanced workload to be overwhelming and ego-shattering. Low self-esteem is a common side effect of these new challenges. College student need to put aside their doubt and focus on learning in order to succeed.

Self-concept requires a self-evaluation process in which individuals compare their description of themselves as they are

with their description of themselves as they would like to become and as they fear becoming. Self-concept depends on living up to one's ideals. Self-evaluation is important because the subject can assess what they know, what they do not know, and what they would like to know. They begin to recognize their strengths and weaknesses and will be able to set goals that they know they can attain with the new knowledge they have about themselves.

Self-Concept

Self-concept is our perception of our ability and our uniqueness. Self-concept is very general and changeable, as we grow older the self-perception becomes much more organized detailed, and specific. It is a collection of beliefs about one's nature, unique qualities, and typical behaviour. It is the ability to interact with others, to meet basic needs, awareness of emotional states, feelings about looks, health, physical condition and overall appearance, success or failure in school, and one's functions within the family unit. The individual self consists of attributes and personality traits that differentiate us from other individuals. The relational self is defined by our relationships with significant others.

Self-concept is made up of one's self-schemas and interacts with self-esteem, self-knowledge, and the social self to form the self. It includes the past, present, and future selves, where future selves (or possible selves) represent individuals' ideas of what they might become, what they would like to become, or what they are afraid of becoming. Possible selves may function as incentives for certain behaviours (Rajkumar & Harikrishnan, 2017). The perception people have about their past or future selves is related to the perception of their current selves. The temporal self-appraisal theory argues that people tend to maintain a positive self-evaluation by distancing themselves from their negative selves and paying more attention to their



positive ones. In addition, people tend to perceive the past self favourably (e.g. "I'm better than I used to be") and the future self more positively (e.g. "I will be better than I am now").

Self-Concept among College Students

Our academic self-concept relates to how well we do in college or how well we learn. There are two levels: a general academic self-concept of how good we are overall and a set of specific content-related self-concepts that describe how good we are in math, science, language arts, social science, etc. The social self-concept describes how we are late to other people and the transpersonal self-concept describes how we relate to the supernatural or unknowns. However, when studying groups of individuals, the focus is generally on how individuals perform within the group rather than the study of the group as a whole. Scientists who study animals and people in terms of group and institutional behaviour generally align themselves with sociology while individuals who focus on human culture and belief systems generally align themselves with anthropology.

The dynamic aspect of self-concept (and, by corollary, self-esteem) is important because it indicates that it can be modified or changed. "There is a growing body of research which indicates that it is possible to change the self-concept. Self-change is not something that people can do but rather it depends on the process of self-reflection. Through self-reflection, people often come to view themselves in a new, more powerful way, and it is through this new, more powerful way of viewing the self that people can develop possible selves". There are several different components of self-concept physical, academic, social and transpersonal. The physical aspect of self-concept relates to that which is concrete: what we look like, our sex, height, weight etc. what kind of clothes we wear; what kind of car we drive what kind of home we live in and so forth. Our academic self-concept relates to how well we do in school or how well we learn. There are two levels: a general academic self-concept of how good we are overall and a set of specific content-related self-concepts that describe how good we are in math, science, language arts, social science, etc.

The social self-concept describes how we are late to other people and the transpersonal self-concept describes how we relate to the supernatural or unknowns. The relationship of self-concept to academic achievement is very specific (Rajkumar Rajadurai & Hema Ganapathi, 2023). General self-concept and non-academic aspects of self-concept are not related to academic work; general academic achievement measures are related moderately to academic success. Specific measures of subject-related self-concepts are highly related to success in that content area. If academic achievement leads to self-concept, but self-concept is a better predictor of being a low-track or high-track student, there is some intervening variable. It's meant the intervening variable is personal expectations.

NEED AND IMPORTANCE OF THE STUDY

The self-concept is the accumulation of knowledge about the self, such as beliefs regarding personality traits, physical characteristics, abilities, values, goals, and roles. Beginning in infancy, children acquire and organize information about them

as a way to enable them to understand the relation between the self and their social world. This developmental process is a direct consequence of children's emerging cognitive skills and their social relationships with both family and peers. During early childhood, children's self-concepts are less differentiated and are centered on concrete characteristics, such as physical attributes, possessions, and skills. During middle childhood, the self-concept becomes more integrated and differentiated as the child engages in social comparison and more clearly perceives the self as consisting of internal, psychological characteristics. Throughout later childhood and adolescence, the self-concept becomes more abstract, complex, and hierarchically organized into cognitive mental representations or self-schemas, which direct the processing of self-relevant information. Self concept is a component of human personality development; it has its own nature and peculiarity. Self concept among college student influence their ability, personality ,outlook whether it may be positive or negative ,motivation ,behavior self perception attributes, confidence ,leadership and behavior etc. Self concept of college student helps them to achieve academic excellence. Based on this observation, the present study was undertaken.

REVIEW OF RELATED LITERATURE

Prem Kumar and Subramonian (2024) conducted a study on a study of Academic Self- Concept and Academic Achievement of B.Ed., Trainees. The major findings were there was a significant relationship between Academic Self – Concept and Academic Achievement of B.Ed., Trainees with U.G as their Qualification. Qualification (PG) Type of institution locality and Type of Family of the B.Ed., Trainees did not influence the relationship between Academic Self – Concept and Academic Achievement.

Indu Sadhwani (2023) conducted a study on the "Effect of Self –Concept Adolescent Depression "Depression and Self-concept attitudes of 800 adolescent boys and girls were assessed. Both Dimension of Self -Concept Attitude as low Self –Concept and high Self –Concept tended to be correlated positively with Depression. The results indicate that persons with low Self–concept show a higher degree of Depression. Then the high–concept counterparts". The Present study also examines the role of sex and culture and Self–concept on adolescent Depression. The findings indicated insignificant between both. That is low or high Self–concept groups were not affected by their sex and culture.

Jagpreet Kaur and Munish Kumar (2022) conducted a study on the Impact of the type of school Environment on the Self-concept of Adolescents. The study was conducted on a representative sample of 200 adolescents of the ninth class selected on the basis of randomized technique of sampling from different Govt and Private schools of Patiala district of Punjab. The children's Self – Concept scale was used to measure Self – concept and the school Environment Inventory (SEI) was used to evaluate the school environment of school-going Adolescents. The findings of the present study highlight the importance of promoting positive Self –Concept in Every Aspect in various Psycho – Social Contexts.



Nishta Rana (2022) conducted a study on the relationship between the Socio-Emotional School climate of an individual, especially of a child with special needs is an important variable influencing the psychological aspects of His / Her personality like Self – Concept, Adjustment, Motivation, Creativity, social maturity etc. The researcher made attempts has been made to study the relationship between Socio-Emotional School climate and Self – Concept of (CWSN). A sample of 204 CWSN was selected from various Government Elementary schools of District Kangra through purposive sampling. The study revealed that sex differences are significant at 0.01 level while residential background differences are not significant concerning their socio-emotional school climate. No significant difference was found between male and female CWSN in self – concept but rural and urban CWSN had significant difference at 0.05 level with respect to their self-concept. The Coefficient of Correction between socio-emotional school climate and self-concept was found to be 232 which is significant at 0.01 level. It indicates that high scores in the Socio-Emotional School climate tend to accompany high scores in Self-concept.

Gakhar and Gudarshan Bains (2021) undertook a study of Self-concept and study Habits of students of Arts and Science Streams, Individuality is at the core of the human subject's personality and plays a vital role in guiding one endeavour in specific conditions. This paper defines individuality as a self-concept and seeks to determine its validity with respect to Areas of Arts and Science. The distinction between this two area is finally reflected in Arts students who are found to have higher social self-concept and conversely in Science Students who are found to have higher intellectual Self-concept.

Mona (2021) conducted a study on the Career Maturity of Adolescents in Relation to Self-concept and family Environment among the adolescents of plus one stage. A random sampling procedure was used to select the sample, 640 studying in Government schools of Amritsar district formed the sample. They were from four, streams viz, science, commerce, Arts and vocational, There were 320 boys and girls varying in age from 16-18 yrs. The career maturity scale (Nirmala Gupta, 1989). Self Concept (Pratibha Deo, 1985), was administered to the sample. Data was analyzed using the product moment Coefficient of Correlation and critical ratio. The findings revealed that academic group students had higher career maturity, Self –concept and perceived a better family environment as compared to their vocational counter parts . Girls in the sample possessed greater career maturity and Self –concept as compared to boys whereas boys perceived the healthy Environment of the family as compared to Girls.

Munkalita (2021) conducted a study on “Visually impaired adolescent students to compare their self-concept”. This study used to sample of 200 visually impaired adolescent students .The findings revealed that there is no significant difference in self-concept between normal and visually impaired adolescent student. They differ only on two dimensions of self-concept Behaviours and popularity.

Sophia Gir et.al (2021) conducted a study on the” Association Between Self-Esteem and Stress in Adolescents “residing within the municipal limits of Udaipur city. The sample for the present study consisted of 480 boys and girls between the age of 12 – 18 yrs having high or low Self-esteem. Self-esteem and assessment inventory was used to assess the level of Self-esteem and level of stress experienced by adolescents. The findings of the present study revealed that majority of adolescents with high Self-Esteem were found to have a low level of stress while adolescents with low Self –Esteem reported to experience high level of stress and boys belonging to (16-18) experienced high level of Stress.

OBJECTIVES OF THE STUDY

- ❖ To find out the level of Self-concept among college students.
- ❖ To find out the significant difference in Self-concept among college students with respect to gender.
- ❖ To find out the significant difference in Self-concept among college students with respect to type of institution.
- ❖ To find out the significant difference in Self-concept among college students with respect to kind of institution.

HYPOTHESES OF THE STUDY

- ❖ There will be a significant mean score difference in self-concept among college students with respect to gender.
- ❖ There will be a significant mean score difference in self-concept among college students with respect to the type of institution.
- ❖ There will be a significant mean score difference in self-concept among college students with respect to the kind of institution.

RESEARCH DESIGN

Research Design and the procedures for research that span the decision from broad assumptions to detailed methods of data collection. The selection of a research design is also based on the nature of the research problem or issue being addressed, the researcher's personal Experiences, and the audience for the study. As the present study deals with the study on self concept of college students, the investigator adopted the survey method which was found suitable for the study. The survey method gathers data from a relatively large number of cases at a particular time. It is not concerned with the characteristics of Individuals as Individuals. It's concerned with the statistics that result when data are abstracted from some Individual cases.

Population of the Study

The population of the present study was undergraduate students studying in Government and private colleges located in the Erode district and it is affiliated to Bharathiyar University, Coimbatore.

Sample of the Study

A sample is a true representative of the population corresponding to its properties. Sampling saves a lot of time, cost, and energy. It ensures completeness and a high degree of



exhaustive data collection is possible. For the present study, 395 students who are studying in Government and private colleges in and around Erode district have been selected for this study by using a simple random sampling Technique.

Tools Used in the Study

The Self-concept scale was used for the present study. This tool the investigator was developed and standardised. The scale consists of 25 items. All the items are scored on 4-point scale such as Strongly Agree (3), Agree (2), Disagree (1) and Strongly Disagree (0). The higher the score on the scale greater the degree of Self-concept.

Reliability

The Self Concept scale was administered to 30 college students. The split-half method was used to determine the scale's reliability. The reliability value 0.76. Since the reliability coefficient is found to be high and the inventory is considered reliable.

Validity

The tool was presented to experts to assess the content validity of the items. All the experts carefully read each item of the scale and gave comments and suggestions, based on the suggestions given by the experts, some of the items were altered. Thus the inventory was again shown to experts and confirmed the content validity of the tool.

Pilot Study

A pilot study can reveal deficiencies in the design of a proposed experiment or procedure, and these can then be addressed before time and resources are expended on large-scale studies. A good research strategy requires careful planning and a pilot study will often be a part of this strategy. The researcher has conducted a pilot study with 30 students. The collected data was scored by using a scoring key prepared by the investigator. Based on the response, some items were modified.

Method of Data Collection

The investigator reasonably approached the students after getting permission from the concerned head and explained briefly the importance of the investigation and their role in the investigation. Then inventory was handed over information given by them was kept confidential after the completion, the inventory was collected from them and the investigator thanked them for their cooperation. Later the entire response sheets were scored with the help of the scoring key, the data was tabulated. The filled-in scale was tabulated data was analyzed statistically using descriptive analysis.

DATA ANALYSIS

Objective-1: To find out the level of Self-concept among college students

Table: 1 Level of self-concept among College students

Variable	Low		Moderate		High	
	N	%	N	%	N	%
Self-Concept	132	33.42	121	30.63	142	35.95

From the above table-1, 35.95 % (142) of the college students have high level of self-concept, 33.42% (132) have low level, and 30.63% (121) of them moderate level in self-concept among college students.

Hypothesis-1

There will be a significant mean score difference in Self-concept among college students with respect to gender.

Table: 2 Mean score difference in Self-concept among college students with respect to gender

Variable	N	Mean	S.D	t - Value	Level of Significance
Male	232	55.00	8.45	1.73	NS*
Female	163	53.43	9.21		

*Not significant at 0.05 level.

From above the table-2, it is noted that the calculated t-value is less than the tabulated value at 0.05 Level. So, hypothesis-1 is rejected. It can be concluded that there is no significant difference between Male and Female college students. It is also inferred that both Male and Female college students are homogeneous in Self-concept.

Hypothesis-2

There will be a significant mean score difference in Self-concept among college students with respect to type of institution

Table: 3 Mean score difference in Self-concept among college students with respect to type of institution

Variable	N	Mean	S.D	t - Value	Level of Significance
Govt	199	53.87	9.29	1.29	NS*
Private	196	55.02	8.33		

*Not Significant at 0.05 levels.

From above the table-3, it is noted that the calculated t-value is less than the tabulated value at 0.05 Level. So, hypothesis-2 is

rejected. It can be concluded that there is no significant difference between Government college and private college



students. It is also inferred that type of institution does not influence the self-concept of college students.

Hypothesis-3

There will be a significant mean score difference in Self-concept among college students with respect to kind of institution

Table: 4 Mean score difference in Self-concept among college students with respect to the kind of institution

Variable	N	Mean	S.D	t - Value	Level of Significance
Mixed	332	54.11	9.08	1.86	NS*
Unisex	63	56.07	7.37		

*Not Significant at 0.05 level.

From above the table-4, it is noted that the calculated t-value is less than the tabulated value at 0.05 Level. So, hypothesis-3 is rejected. It can be concluded that there is no significant difference in self-concept among college students with respect to the kind of institution.

FINDINGS OF THE STUDY

- From the above table-1, 35.95 % (142) of the college students have high level of self-concept, 33.42% (132) have low level, and 30.63% (121) of them moderate level in self-concept among college students.
- From above the table-2, it is noted that the calculated t-value is less than the tabulated value at 0.05 Level. So, hypothesis-1 is rejected. It can be concluded that there is no significant difference between Male and Female college students. It is also inferred that both Male and Female college students are homogeneous in Self-concept.
- From above the table-3, it is noted that the calculated t-value is less than the tabulated value at 0.05 Level. So, hypothesis-2 is rejected. It can be concluded that there is no significant difference between Government college and private college students. It is also inferred that type of institution does not influence the self-concept of college students.
- From above the table-4, it is noted that the calculated t-value is less than the tabulated value at 0.05 Level. So, hypothesis-3 is rejected. It can be concluded that there is no significant difference in self-concept among college students with respect to kind of institution.

EDUCATIONAL IMPLICATIONS

- The results of this study indicate Self-concept is related to many other developmental accomplishments. The affective component of self-concept has been empirically associated with positive social development, ethnic identity development, positive peer and parent interactions and relationships, insulation against the development of a deviant identity and delinquent behaviours, less anxiety and depression, and greater satisfaction.
- Academic self-concept has been consistently linked to positive academic outcomes. This finding is not surprising given that the high value placed on academic competence by society typically results in positive academic competence feelings for learners who are successful in their academic endeavors. These positive

academic affective self-evaluations are believed to influence future academic motivation.

- Self-concept is composed of two key parts: personal identity and social identity. Our personal identity includes such things as personality traits and other characteristics that make each person unique. Social identity includes the groups we belong to including our community, religion, college, and other groups.
- They are social the ability to interact with others, competence ability to meet basic needs, affect awareness of emotional states, physical feelings about looks, health ,physical condition and overall appearance, Academic success, family how well function within family.
- Student with positive self concept perform well in academic activities. Their self esteem level increase considerably to higher.

CONCLUSION

The main findings of the study are indicated that there was no significant difference between Male and Female college students. It is also inferred that both Male and Female college students are homogeneous in Self-concept. There was no significant difference between Government college and private college students. It is also inferred that type of institution and kind of institutions does not influence the self-concept of college students. The self-concept of college students is a multifaceted and dynamic construct, influenced by a variety of internal and external factors. Through this critical analysis, it is evident that college students' self-concept evolves significantly during their academic journey. Factors such as academic performance, social interactions, extracurricular activities, and personal experiences play pivotal roles in shaping their self-perception.

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EVALUATING RESOURCE ALLOCATION MANAGEMENT TO HOSPITALS IN BAUCHI STATE: A CASE STUDY OF FEDERAL MEDICAL CENTRE AZARE AND PRIMARY HEALTHCARE CENTRE AZARE

Sani Mahmud Affa, Xu Xinglong.

School of Management, Jiangsu University, Zhenjiang, 212013 PR. China

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ABSTRACT

Background: This study evaluates resource allocation management in hospitals in Bauchi State, focusing on Federal Medical Centre (FMC) Azare and Primary Healthcare Centre (PHC) Azare. The research addresses significant disparities in resource allocation that affect healthcare service delivery and patient outcomes.

Methods: Using a mixed-method approach, the study combines quantitative data analysis of financial records, resource allocation reports, and healthcare service delivery metrics with qualitative insights from interviews and focus group discussions. Data Envelopment Analysis (DEA) was utilized to measure the relative efficiency of the hospitals in converting inputs such as financial resources, staff, and infrastructure into healthcare services and outputs. Additionally, descriptive analysis was conducted using IBM SPSS version 27 to analyze 100 questionnaire responses and demographic data.

Results: The findings reveal significant disparities between FMC Azare and PHC Azare, with FMC Azare benefiting from more adequate financial resources, human resources, medical supplies, and infrastructure. These disparities lead to differences in patient satisfaction, service delivery efficiency, patient outcomes, and waiting times.

Conclusions: The study underscores the need for more equitable resource allocation to improve healthcare delivery and patient outcomes at under-resourced centers like PHC Azare. Recommendations for policy interventions include addressing resource allocation inequities, staffing solutions, supply chain improvements, and infrastructure development. These recommendations aim to enhance resource allocation management, thereby improving healthcare services in Bauchi State and providing insights applicable to similar contexts in Nigeria, Africa, and globally.

KEYWORDS: Resource Allocation Management, Healthcare Delivery, Data Envelopment Analysis (DEA), Federal Medical Centre, Primary Healthcare Centre.

BACKGROUND

The management of resource allocation in healthcare systems is essential for ensuring equitable access to services, optimizing the use of resources, and enhancing the quality of care provided. In Bauchi State, Nigeria, the healthcare sector faces significant challenges, including inadequate financial resources and infrastructural deficiencies. Therefore, it is crucial to understand and evaluate the effectiveness of resource allocation management in hospitals [1, 2].

Ensuring the appropriate allocation of beds is crucial to facilitate the prompt provision of care, prioritize critical cases, and enhance patient outcomes. The implementation of effective bed management practices has been found to have a positive impact on resource utilization, waiting times, and patient satisfaction [3]. Nevertheless, persistent difficulties such as overcrowding and insufficient discharge planning continue to affect the quality of

patient care and the operations of hospitals [4]. Additionally, in times of crises such as natural disasters or disease outbreaks, the presence of a dependable bed allocation system becomes essential to effectively address sudden increases in the number of patients seeking medical care [5]. According to Lai et al. [6], the appropriate allocation of beds serves the dual purpose of safeguarding patient well-being and promoting efficient patient transfers while also alleviating administrative constraints.

Effective management of human resources is equally crucial for ensuring optimal healthcare delivery, including bed distribution. According to Gruen et al. [7], it is imperative to maintain sufficient workforce levels, provide continuous training, and cultivate employee engagement to effectively deliver high-quality care, mitigate burnout, and retain highly competent individuals. Furthermore, effective systems and processes are important for optimizing workflows, decreasing redundancies, and enhancing



overall operating efficiency [8]. According to Lai et al. [6], the implementation of standardized procedures in healthcare organizations can lead to improvements in service delivery, increased responsiveness to patient demands, and optimized allocation of resources.

To address these concerns fully, this research attempts to analyze the effectiveness of resource allocation management in Bauchi State's healthcare system. By examining present procedures, identifying challenges, and offering solutions for improvement, this study intends to enhance healthcare delivery, maximize resource usage, and ultimately improve patient outcomes. The research will involve both qualitative and quantitative methodologies. Qualitative interviews and focus groups will be performed with healthcare administrators, frontline workers, and patients to collect perspectives into existing resource allocation procedures, issues faced, and opportunities for improvement. Additionally, quantitative data such as bed occupancy rates, treatment rates, and the number of consultations provided will be collected from hospital records and analyzed to measure the effectiveness of resource allocation.

Furthermore, the study will apply a comparative analysis approach to assess Bauchi State's healthcare system against best practices in resource allocation management globally. This would involve studying literature and case studies from other regions or countries having comparable healthcare concerns to find successful techniques and treatments that may be applied to the local environment. Based on the findings, the research will give recommendations for enhancing resource allocation management in Bauchi State's healthcare system. These proposals may include investing in infrastructure upgrades, deploying technology solutions for bed management, boosting staff training and retention programs, and enhancing collaboration amongst healthcare facilities. By addressing the issues in resource allocation management, this research aims to contribute to the improvement of healthcare service in Bauchi State, Nigeria. By optimizing resource use, enhancing patient care quality, and improving overall healthcare outcomes, the study hopes to make a beneficial influence on the health and well-being of the community.

METHODS

Data Collection

The design of this research is shaped by the complexity of analyzing resource allocation management in hospitals, specifically within Bauchi State. A mixed-methods approach was deemed appropriate for this study, allowing for a comprehensive integration of both quantitative and qualitative data collection and analysis techniques. This methodological choice is intended to provide a nuanced understanding of resource allocation practices within healthcare facilities, particularly focusing on the Federal Medical Centre Azare and the primary healthcare center Azare.

The research design serves as the overarching framework for this study, ensuring a cohesive integration of various components to address the research problem effectively. As articulated by Thakur and Shah [9], the research design is the blueprint guiding data collection, measurement, and analysis. For this study, a case study approach was selected due to its capacity for in-depth examination of a single entity. This design was chosen for its ability to delve deeply into the subject matter, enabling the researcher to gather detailed information rather than merely making predictions. The research was structured as a descriptive case study, where the research questions were tested, and relevant data were collected through carefully designed instruments. The target population for this study includes stakeholders directly involved in resource allocation management within the Federal Medical Centre Azare and the primary healthcare center Azare. This encompasses hospital management, healthcare providers, and patients. To ensure a representative sample across various departments and functions within the hospitals, purposive sampling was employed.

In determining the sample size, the concept of selecting a sufficient number of observations for meaningful statistical analysis was considered, as discussed by Charan et al. [10]. For the quantitative component of this study, a sample size of 100 respondents was purposefully selected to capture a broad spectrum of perspectives. Additionally, respondents from different units of the hospital including doctors, nurses, administrators, and support staff were interviewed to provide qualitative insights based on their experiences. The use of purposive sampling techniques ensured that the data collected were both precise and relevant to the study's objectives.

The research employed a combination of primary and secondary data collection methods to obtain a comprehensive view of resource allocation management. Approval for data collection was sought from the relevant hospital authorities on October 18th, 2023, through a formal request. Primary data were gathered through interviews with key stakeholders, such as hospital administrators, healthcare providers, and patients. Surveys were also administered to collect quantitative data on resource allocation practices and perceptions. In addition, secondary data were sourced from an extensive review of existing literature, reports, and records related to healthcare resource distribution in Bauchi State.

To capture both quantitative and qualitative data, the research employed a mixed-methods instrument design. A structured questionnaire was used to collect quantitative data, focusing on participants' views on resource allocation processes, perceived barriers, and outcomes. This questionnaire featured closed-ended questions, utilizing Likert scales to measure the degree of agreement or disagreement with various statements related to resource allocation.



Qualitative data were collected through semi-structured interviews with key stakeholders. These interviews were designed to explore participants' perspectives on resource allocation decision-making processes, the factors influencing these decisions, and the perceived outcomes. Open-ended questions allowed participants to share detailed insights and experiences related to resource allocation management.

Selection of specific input and output variables for DEA

The indicators chosen for the DEA analysis were selected due to their critical relevance and ability to provide comprehensive insights into resource allocation and healthcare service delivery. Human resources, including medical and administrative staff, are essential for patient care and operational management. The number and competency of medical personnel directly affect the quality-of-care patients receive, while administrative staff ensure that the healthcare facility runs smoothly. Financial resources, such as budget allocations, determine the facility's capacity to procure necessary supplies, maintain infrastructure, and support staff salaries. Without adequate financial resources, even the best-planned healthcare services cannot be effectively implemented.

Physical resources, like the number of beds and medical equipment, directly impact the ability to treat patients effectively.

For instance, the availability of advanced medical equipment can enhance diagnostic accuracy and treatment outcomes, while the number of beds affects the facility's capacity to admit and care for patients. Output variables, such as healthcare outcomes (patients treated, consultations provided, bed occupancy rates) and operational indicators (waiting times, patient flow), reflect the efficiency and quality of service delivery. These outcomes are crucial for assessing the effectiveness of resource allocation, as they provide measurable evidence of how well the healthcare facility is meeting patient needs.

These indicators were carefully selected to ensure they accurately capture the complex nature of resource allocation and its impact on patient care and operational efficiency. By including a broad range of inputs and outputs, the DEA analysis can provide a holistic view of the healthcare facilities' performance. This comprehensive approach ensures that the study considers all relevant aspects of resource allocation, from the availability of human and physical resources to the final healthcare outcomes experienced by patients. Such a detailed examination helps in identifying areas of inefficiency and potential improvements, ultimately contributing to better healthcare service delivery.

Table 1: Input-Output Indicators for Evaluating Operational Efficiency of FMC AZARE and PHC AZARE Hospitals

Primary Indicators	Secondary Indicators	Unit
Input	Budget Allocation	Naira
	Healthcare Professionals (doctors, nurses, pharmacists)	Staff
	Total No. of Beds	Sheets
Output	Total No. of Patients Treated	People
	No. of Consultation Provided	Units
	Bed occupancy Rates	Percentage

Input & Output indicators

DATA ANALYSIS

DEA model

Data Envelopment Analysis (DEA) is a method that uses linear programming to measure the relative efficiency of decision-making units (DMUs). It can simultaneously handle multiple input and output indicators, with the BCC model being the most widely used.

Assuming there are n decision-making units (DMUs), each DMU has m inputs and s outputs. For a specific DMU, the input-oriented BCC model is as follows:

$$\begin{aligned} & \max(\mu^T y_0 - \mu^0) \\ & s.t. \omega^T x_j - \mu^T y_j + \mu_0 \geq 0 \\ & \omega^T x_0 = 1 \\ & \omega \geq 0, \mu \geq 0, j = 1, \dots, n. \end{aligned}$$

$x_j \ y_j \ \omega^T \ v^T$ In Formula 1.1, X and Y represent input and output vectors, respectively, and λ and θ are weight variables. By using the Charnes-Cooper transformation, the linear programming formulation of the BCC model is obtained:



min θ

$$s.t. \sum_{j=1}^n x_j \lambda_j \leq \theta x_0$$

$$\sum_{j=1}^n y_j \lambda_j \geq y_0$$

$$\sum_{j=1}^n \lambda_j = 1$$

$$\lambda_j \geq 0, j = 1, \dots, n.$$

Empirical analysis of data was conducted in this research which the use of graphs, tables and charts. This aims to provide a graphical, detailed result and well explained result gotten from the DEA model.

This study adopts DEA analysis as it is most suitable in evaluating the efficiency of hospitals in converting inputs such as financial resources, staff, and infrastructure into healthcare services and outputs. It also enables bench-marking by comparing the performance of healthcare facilities against each other or within a single facility. Considering the above performance of DEA analysis, the researcher deems it fit to use the DEA for the analysis.

The researcher used IBM SPSS version 27 for analyzing the questionnaire and demographics. The researcher also used the BCC model of DEA, with the use of DEAP 2.1 to analyse the input and output variables.

BCC model

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$$\omega^T x_0 = 1$$

$$\omega \geq 0, \mu \geq 0, j = 1, \dots, n.$$

$x_j y_j u^T v^T$ In Formula 1.1, X and Y represent input and output vectors, respectively, and λ and θ are weight variables. By using the Charnes-Cooper transformation, the linear programming formulation of the BCC model is obtained:

min θ

$$s.t. \sum_{j=1}^n x_j \lambda_j \leq \theta x_0$$

$$\sum_{j=1}^n y_j \lambda_j \geq y_0$$

$$\sum_{j=1}^n \lambda_j = 1$$

$$\lambda_j \geq 0, j = 1, \dots, n.$$

In this study, the BCC model will be used to evaluate the operational efficiency of FMC AZARE and PHC AZARE hospitals from 2021 to 2023.

Table 2: Data from FMC and PHC 2021-2023

YEAR	HOSPITAL	Budget Allocation (Input 1)	Healthcare Professionals (Input 2)	Total No. of Beds (Input 3)	Total No. of Patients Treated (Output 1)	No. of Consultation Provided (Output 2)	Bed occupancy Rates (Output 3)
2021	FMC AZARE	N1,533,633,100.00	105	280	125,000	122,000	96%
2022	FMC AZARE	N1,883,963,102.00	150	350	133,000	122,876	84%
2023	FMC AZARE	N1,900,536,000.00	288	412	140,000	123,000	82%
2021	PHC AZARE	N6,000,000	9	24	137	120	90%
2022	PHC AZARE	N8,000,000	11	24	155	144	97%
2023	PHC AZARE	N8,000,000	11	24	168	159	91%

Source: Quantitative data, 2024

Note: ₦ = Nigerian naira



Descriptive statistics

Quantitative data gathered through questionnaires are evaluated using descriptive and inferential statistical approaches. Descriptive statistics such as frequencies, percentages, and measures of central tendency are used to summarize demographic variables and replies to closed-ended questions. Inferential statistics, such as correlation analysis and regression analysis, are applied to evaluate correlations between variables and uncover predictors of resource allocation efficiency.

RESULTS

Assessment of Hospital Resource Efficiency in FMC and PHC

Table 3 provides a detailed evaluation of resource allocation practices and healthcare quality at Federal Medical Centre (FMC) Azare and the primary healthcare center (PHC) Azare based on various indicators. The availability of healthcare resources was rated by the majority, 59% (Mean=2.64, SD=0.785), as average. This indicates a general perception that resource availability is neither particularly good nor very poor, but adequate. Despite a mean rating closer to average, the fact that a significant percentage (33%) rated it as poor or very poor suggests that there are notable concerns about the adequacy and availability of necessary healthcare resources. In terms of healthcare provider satisfaction, most respondents, 61% (Mean=3.05, SD=0.835), rated their satisfaction with healthcare providers as average. This suggests that while there are areas for improvement, the overall satisfaction level is acceptable. The distribution of responses indicates that a considerable number of respondents see room for enhancement in the satisfaction levels with their healthcare providers. Healthcare quality received a relatively favorable rating, with 41% (Mean=3.40, SD=0.752) of respondents rating it as good. This indicates that the quality of healthcare provided is generally seen as above average. The mean rating of 3.40 suggests that many respondents are satisfied with the quality of care they receive, although there is still a significant portion (54%) that sees room for improvement. The availability of healthcare workers was a significant concern, with 52% (Mean=2.41, SD=0.683) rating it as poor. This highlights a critical issue in staffing levels at these healthcare facilities. The low mean rating and the high percentage of respondents rating it as poor underscore the need for urgent measures to improve the availability and accessibility of healthcare personnel. Bed occupancy was rated more positively, with nearly half, 49% (Mean=3.24, SD=0.780), rating bed availability as average, and an additional 32% rating it as good. This suggests a generally satisfactory situation regarding bed occupancy, although there remains a substantial portion of respondents who believe that improvements can still be made.

Factors Influencing Resource Allocation

Table 4 provides an analysis of the primary factors shaping resource allocation decisions in Federal Medical Centre (FMC) Azare and the primary healthcare center (PHC) Azare. The table evaluates several indicators based on the responses from the survey. The influence of government policy on resource allocation received a neutral rating from the majority of

respondents, with 48% selecting this option (Mean=2.88, SD=0.868). This suggests that while government policies play a role in resource allocation decisions, their impact is perceived as moderate and not particularly strong or weak. The distribution of responses indicates a balanced view on the effect of government policies, with a mix of agreement and disagreement among the respondents. Patient demand was viewed as a more significant factor, with 35% agreeing and 9% strongly agreeing that it influences resource allocation (Mean=3.31, SD=0.950). The higher mean rating indicates that patient demand is considered an important factor in the decision-making process. This highlights the need for healthcare facilities to align their resource allocation with patient needs and demands, ensuring that services are responsive to the patient population. Institutional priorities were generally rated as a less significant influence, with a majority, 51% (Mean=2.38, SD=0.801), disagreeing that they play a major role. This suggests that internal institutional goals and priorities may not be the primary drivers of resource allocation decisions. The relatively low mean rating reflects a perception that institutional priorities are not at the forefront of resource allocation considerations in these healthcare settings. Resource availability was highlighted as a significant factor influencing decisions, with 59% agreeing and 5% strongly agreeing (Mean=3.60, SD=0.752). This indicates that the availability of resources is a key determinant in how resources are allocated within these healthcare facilities. The high mean rating underscores the critical importance of ensuring that adequate resources are available to meet the operational needs of healthcare providers. The influence of staff availability on resource allocation decisions was rated relatively low, with 46% disagreeing (Mean=2.44, SD=0.783). This suggests that although staff availability is a factor, it is not seen as a predominant influence compared to other factors like patient demand and resource availability. The low mean rating indicates a perception that while important, staff availability is secondary to other more pressing factors in resource allocation decisions.

Impact of Resource Allocation Management

Table 5 provides an analysis of the impact of resource allocation management on healthcare service delivery and patient outcomes at Federal Medical Centre (FMC) Azare and the primary healthcare center (PHC) Azare. The perception of efficient allocation in FMC and PHC was rated as neutral by the majority, with 62% selecting this option (Mean=2.80, SD=0.725). This suggests that while resource allocation is generally viewed as adequate, there is room for improvement in terms of efficiency. The fact that a significant proportion of respondents rated it as poor or very poor indicates that there are notable concerns about how efficiently resources are being allocated. This indicator received a relatively high rating, with 46% agreeing and 9% strongly agreeing that resource allocation is based on patients' needs (Mean=3.54, SD=0.797). This highlights a positive aspect of the resource allocation process, suggesting that decisions are often made with a focus on meeting patient requirements, which is crucial for improving patient outcomes and overall service



delivery. Transparency in allocation practices was rated poorly, with 56% disagreeing and 18% strongly disagreeing (Mean=2.11, SD=0.723). This indicates a significant concern about the openness and clarity of the allocation process, suggesting a need for greater transparency to build trust and ensure fair distribution of resources. This indicator received positive ratings, with 52% agreeing and 18% strongly agreeing that resource allocation is based on departmental priorities (Mean=3.82, SD=0.809). The high mean rating suggests that departmental needs are a key consideration in the allocation process, which can help ensure that specific areas within the healthcare facilities receive the resources they need to function effectively. The influence of institutional priorities on resource allocation was rated poorly, with 46%

disagreeing and 26% strongly disagreeing (Mean=2.08, SD=0.872). This indicates that institutional goals and priorities are not seen as major drivers of resource allocation decisions, which may reflect a disconnect between higher-level strategic goals and practical allocation practices.

Empirical Analysis of Hospital Operational Efficiency Evaluation

Using deap2.1 software, the BCC model was selected to calculate the input-output data of FMC AZARE and PHC AZARE hospitals from 2021 to 2023, obtaining their comprehensive efficiency, pure technical efficiency, and scale efficiency values.

Table 2: Three Types of Operational Efficiency for FMC AZARE and PHC AZARE from 2021 to 2023

DMU	Overall Efficiency	Pure Technical Efficiency	Scale Efficiency	Scale Returns
FMC AZARE2021	1.0000	1.0000	1.0000	Constant
FMC AZARE2022	0.8661	1.0000	0.8661	Decreasing
FMC AZARE2023	0.9038	1.0000	0.9038	Decreasing
PHC AZARE2021	1.0000	1.0000	1.0000	Constant
PHC AZARE2022	1.0000	1.0000	1.0000	Constant
PHC AZARE2023	0.9515	1.0000	0.9515	Decreasing

The operational efficiency of FMC Azare and PHC Azare from 2021 to 2023 shows varying trends. The figures indicate changes in key performance metrics such as service efficiency (se) and patient treatment efficiency (pte), highlighting the dynamic nature of operational performance in these healthcare institutions. See *Figure 1: Trends in the Operational Efficiency of FMC AZARE and PHC AZARE from 2021 to 2023.*

DISCUSSION

The study utilized a blended strategy approach, integrating both qualitative and quantitative information. The quantitative stage

included examining emergency clinic records, monetary reports, and patient information to accumulate mathematical data for factual assessment. This information was gathered to survey asset designation and the board at the Federal Medical Center and Primary Healthcare Center Azare in Bauchi State. This approach is consistent with recent literature that emphasizes the importance of mixed-methods research in healthcare settings to provide a comprehensive understanding of resource allocation dynamics [11, 12].

Table 3: Assessment of Hospital Resource Efficiency in FMC and PHC

Statement/Indicator	Level of occurrence					Mean	Std Deviation
	1-Very poor	2-Poor	3-Average	4-Good	5-Very good		
Resource allocation practices: How would you rate availability of healthcare resources in FMC & PHC	11(11%)	22(22%)	59(59%)	8(8%)	0(0%)	2.64	.785
Healthcare provider satisfaction: How satisfied are you with the health care providers in FMC & PHC	5(5%)	14(14%)	61(61%)	15(15%)	5(5%)	3.05	.835
Healthcare quality: How would you rate the healthcare quality in FMC & PHC	0(0%)	11(11%)	43(43%)	41(41%)	5(5%)	3.40	.752
Healthcare staffing: How would you rate the availability of healthcare workers in FMC & PHC	6(6%)	52(52%)	37(37%)	5(5%)	0(0%)	2.41	.683
Bed occupancy: How would you rate the availability of beds to sick patient in FMC & PHC	1(1%)	14(14%)	49(49%)	32(32%)	4(4%)	3.24	.780

Source: Field Survey 2024.



The information assortment instrument picked for this intention was a poll, which was intended to oblige closed ended questions. Close ended questions were organized as different decision sets, permitting respondents to choose from foreordained choices. Furthermore, the survey incorporated a five-direct Likert scale for specific inquiries toward measure reactions. The codes from the reactions were utilized for examination. The survey was pre-tried on numerous occasions to guarantee its adequacy and to gather foundation data about the respondents, empowering similar and relative examination. The concentrate additionally elaborate meetings with partners, including medical clinic executives, medical care suppliers, and patients, to assemble subjective experiences into the dynamic cycles and discernments encompassing asset portion the board. This mixed-methods approach is critical for capturing the multifaceted nature of healthcare resource allocation [13].

The survey results were analyzed using IBM SPSS version 27. the analysis showed that the majority of the demographics were men which accounts for 65%, and were of age 41 above which was 39%

of the respondents. It further showed that majority of the respondents were married which were 68%. The survey focused on questions pertaining to the objectives of the study which the researcher put the questions in the following categories; resource allocation practice, healthcare provider satisfaction, healthcare quality, healthcare staffing and bed occupancy. for resource allocation practice, the survey shows that majority of the respondents 59% (Mean=2.6, SD=.785) believe the availability of resources in both FMC and PHC are of average, for healthcare provider satisfaction, the majority of the respondents believe that the services provided to patients are average with 61% (Mean=3.05, SD=.835). looking and healthcare quality, majority of the respondents 43% (Mean=3.40, SD=.752) also believe that the quality of the healthcare services provided are of average basis, for healthcare staffing, majority 52% (Mean=2.41, SD=.683) believe that the availability of healthcare staff in both FMC and PHC is poor. Bed occupancy, majority of the respondents 49% (Mean=3.24, SD=.780) believe that the availability of beds in these facilities are average.

Table 4: Factors Influencing Resource Allocation

Statement/Indicator	Level of occurrence					Mean	Std Deviation
	1- Strongly Disagree	2 - Disagree	3 - Neutral	4 - Agree	5- Strongly Agree		
Government Policy Influence in FMC & PHC	5(5%)	26(26%)	48(48%)	18(18%)	3(3%)	2.88	.868
Patient Demand Influence in FMC & PHC	3(3%)	16(16%)	37(37%)	35(35%)	9(9%)	3.31	.950
Institutional Priorities Influence in FMC & PHC	10(10%)	51(51%)	31(31%)	7(7%)	1(1%)	2.38	.801
Resource Availability Influence in FMC & PHC	2(2%)	5(5%)	29(29%)	59(59%)	5(5%)	3.60	.752
Staff Availability Influence in FMC & PHC	9(9%)	46(46%)	38(38%)	6(6%)	1(1%)	2.44	.783

Source: Field Survey, 2024

The results reveals a perspective on resource allocation efficiency and effectiveness. It indicates that while a majority of respondents rated resource allocation as neutral (62%, Mean=2.80), suggesting adequacy, there is notable room for improvement in enhancing efficiency. This finding underscores the importance of optimizing resource use to better meet the operational demands of healthcare facilities. Moreover, transparency in allocation practices received a particularly low rating (Mean=2.11), with a significant portion of respondents expressing disagreement (56%) or strong disagreement (18%). This indicates a crucial area for improvement to foster trust and fairness in resource distribution processes [12].

The results shows positive feedback regarding allocation based on patients' needs (Mean=3.54) and departmental priorities (Mean=3.82). These high ratings indicate a strong alignment with patient-centered care and department-specific requirements, suggesting that resources are often allocated in ways that directly benefit patient outcomes and operational efficiency within departments. The factors influencing resource allocation decisions, revealing that while government policies play a moderate role (Mean=2.88), their impact is perceived as neither overwhelmingly strong nor weak. Institutional priorities, however, were rated lower (Mean=2.38), indicating that internal goals and strategies may not heavily influence resource allocation decisions compared to factors like resource availability (Mean=3.60) and patient demand (Mean=3.31) [11].



Table 5: Impact of Resource Allocation Management

Statement/Indicator	Level of occurrence					Mean	Std Deviation
	1- Strongly Disagree	2 - Disagree	3 – Neutral	4 – Agree	5- Strongly Agree		
Efficient Allocation in FMC & PHC	6(6%)	20(20%)	62(62%)	12(12%)	0(0)	2.80	.725
Allocation Based on Patients' Needs in FMC & PHC	0(0)	10(10%)	35(35%)	46(46%)	9(9%)	3.54	.797
Transparency in Allocation Practices in FMC & PHC	18(18%)	56(56%)	23(23%)	3(3%)	0(0)	2.11	.723
Allocation Based on Departmental Priorities in FMC & PHC	1(1%)	4(4%)	25(25%)	52(52%)	18(18%)	3.82	.809
Allocation Based on Institutional Priorities in FMC & PHC	26(26%)	46(46%)	24(24%)	2(2%)	2(2%)	2.08	.872

Source: Field Survey, 2024

The information got for the assessment of asset distribution to the board in Federal Medical Center and Primary healthcare center Azare envelops an extensive arrangement of information and result factors. The info factors incorporate the quantity of specialists, attendants, drug specialists, authoritative staff, and careful hardware, mirroring the human asset limit and clinical gear accessibility in the medical clinic. Also, the dataset remembers data for yearly monetary speculations and the typical number of guests, giving bits of knowledge into the emergency clinic's monetary standing and patient convergence. Then again, the result factors center around medical care results, openness, reasonableness, and quality, including recuperation rates, readmission rates, patient fulfilment, medical care availability, moderateness of administrations, and medical care quality given by the clinic. This broad dataset takes into consideration a comprehensive assessment of asset portion and the board inside the clinical focus.

The choice of information and result factors for the DEA (Data Envelopment Analysis) model utilized in the assessment was painstakingly thought of. The information factors were looked over different sources, including HR, clinic divisions, patients, and government authorities engaged with strategy settling on and asset distribution choices. This comprehensive methodology guarantees that the assessment catches the complex variables affecting asset distribution and the board at the Federal medical Center Azare. Moreover, the utilization of a disperse plot to portray the connection between the quantity of specialists and patients further underscores the meaning of medical services asset distribution, giving important bits of knowledge to managers and

policy-makers to upgrade asset designation and guarantee compelling patient consideration [13].

Considering the framework used, the investigation used both abstract and quantitative ways of managing survey resource apportioning the board at the FMC and PHC Azare. The quantitative stage included looking at clinical facility records, financial reports, and patient data, while the abstract stage included interviews with accomplices like center supervisors, clinical consideration providers, and patients. The use of a survey as the inclined toward data combination instrument thought about the social event of both close-gotten done and honest responses, giving a total viewpoint on the perspectives and dynamic cycles enveloping resource segment the leaders [14, 15].

The assessment framework gave a nuanced cognizance of the complexities drew in with resource segment and the board at FMC and PHC Azare, working with informed choice creation for future improvements in clinical consideration transport. The decision of data and result factors for the evaluation of resource conveyance the leaders at the FMC and PHC Azare was an essential piece of the investigation method. The data factors included monetary allocation, staffing levels (trained professionals, administrative staff), and clinical stuff, while the outcome variable was the treatment rates, number of consultations, and bed occupancy rate. These elements were chosen to assess the center's human resource limit, patient thought, practical efficiency, and the reasonability of available staff in dealing with patient weight [16].

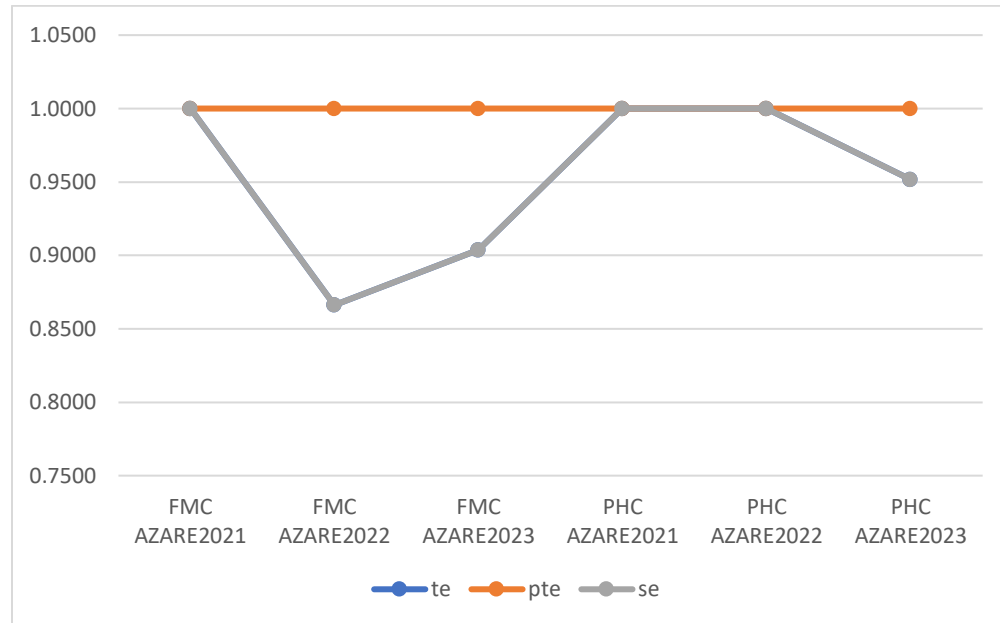


Figure 1: Trends in the Operational Efficiency of FMC AZARE and PHC AZARE from 2021 to 2023

Through the quantitative data gotten from the survey, the researcher was able to get the number of healthcare professionals, number of beds, number of patients treated, number of consultations, bed occupancy rates, and budget allocation to both FMC and PHC during the period of three years (2021-2023). For 2021, FMC had a budget allocation of N1,533,633,100.00, 105 healthcare professionals, 280 number of beds, treated 125,000 patients, provided consultations to 122,000 patients, and their bed occupancy rate was at 96%. As at 2022 their budget allocation rose to N1,883,963,102.00, had 150 healthcare professionals, 350 number of beds, treated 133,000 patients, provided consultations to 122,876 patients, and bed occupancy was 84%. as at 2023, their budget allocation was N1,900,536,000.00, with 288 healthcare professionals, 412 number of beds, treated 140,000 patients, provided consultations to 123,000 patients, and had a bed occupancy rate of 82%.

On the other hand, PMC had N6,000,000 budget allocation for the year 2021, 9 healthcare professionals, 24 beds, and treated a total 137 patients, provided consultations to 120 patients and had a bed occupancy rate of 90%. for the year 2022, they had a budget allocation of N8,000,000, 11 healthcare professionals, 24 number of beds, treated 155 patients, provided consultations to 144 patients, and had a bed occupancy rate of 97%. for 2023, the budget allocation was still same as 2022 which is N8,000,000, and 11 healthcare professionals, 24 number of beds, treated 168 patients, provided consultations to 159 patients, and had a bed occupancy rate of 91%.

Additionally, the survey utilized a data envelopment assessment (DEA) method for managing and evaluating resource dispersion to the facilities. Data and result factors were looked over HR, facility divisions, patients, and government specialists drew in

with methodology making and resource segment decisions. This extensive dataset gave a concentrated layout of the factors affecting resource assignment and the board at the Federal Medical Center Azare (Gai et al., 2017).

From Table 4 and Figure 13, it can be observed that in terms of overall efficiency, the values for FMC AZARE 2021, PHC AZARE 2021, and PHC AZARE 2022 are all 1, indicating that they are DEA efficient and serve as benchmarks for all years. However, the values for FMC AZARE 2022, FMC AZARE 2023, and PHC AZARE 2023 are less than 1, indicating that they are DEA inefficient. Among them, FMC AZARE 2022 has the lowest efficiency value of only 0.8661, indicating a need for improvement in terms of technological and scale levels. In terms of pure technical efficiency, both hospitals have a value of 1 from 2021 to 2023, indicating that they are DEA efficient and do not require any adjustments, suggesting that both hospitals have high levels of technological and organizational management. In terms of scale efficiency, since the pure technical efficiency values for both hospitals from 2021 to 2023 are 1, the scale efficiency values for both hospitals are consistent with the overall efficiency values. Therefore, FMC AZARE 2022, FMC AZARE 2023, and PHC AZARE 2023 urgently need to improve their scale levels in order to continuously enhance their operational efficiency (Alotaibi et al., 2016; Tappenden et al., 2017).

CONCLUSION

The aim of this study has been to provide first hand empirical information about the efficiency of resource allocation to hospitals in Bauchi state with the hope that this can provide some lessons for the hospital sector in North-eastern region of Nigeria. Bauchi state is among one of the poor states in Nigeria situated in one of the poorest regions of the north. The state is facing large



number of issues including healthcare crisis which prompted the evaluation of resources at Federal medical centre and Primary healthcare centre Azare. This is considered critical in view of the scarcity of resources and the severe implications of inefficient utilization of available resources for saving lives.

The data gotten from the hospitals showed there were wide variations in inputs and outputs of the hospitals. The scale efficiency result showed that FMC was more scale efficient in the year 2021 (1.0000), and more inefficient in the year 2022 (0.8661) and 2023 (0.9038). The level of technical efficiency was at constant level in the year 2021 (1.0000), 2022 (1.0000) and 2023 (1.0000). and for the overall efficiency, FMC was more efficient in the year 2021 (1.0000) and then it decreased in the subsequent years 2022 (0.8661) and 2023 (0.9038). For PHC the scale efficiency was at a constant level for year 2021 (1.0000) and 2022 (1.0000), the it decreased in the year 2023 (0.9515). same thing goes for the overall and technical efficiency. Going by the analysis and questionnaire administered, most respondents were not happy with the current state of these facilities and should be open for much more improvement.

The analysis also identified why any given inefficient unit was inefficient relative to the efficient ones. This yielded critical management information about the potential improvements that could be made to improve the efficiency of each inefficient unit. This research provides limited examples of how much each inefficient unit must reduce its input or increase each output to become efficient. However, it is possible that the facilities may expend resources to ensure quality environment for its patients or one that hires compassionate health staff may be rated less efficient than one whose staff are rude and lacking in compassion just on the basis of output. This is an important weakness of this study and needs to be taken into account.

Abbreviations

FMC: Federal Medical Centre
PHC: Primary Healthcare Centre
DEA: Data Envelopment Analysis

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LIVED EXPERIENCES OF COORDINATORS IN THE IMPLEMENTATION OF SENIOR HIGH SCHOOL (SHS) WORK IMMERSION: A QUALITATIVE STUDY

Mary Ann B. MUYCO,¹ Mike M. LEOPARDAS²

Master of Arts in Education major in Educational Management, St. Mary's College of Tagum, Inc.
Graduate School Department, Tagum City, Philippines

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ABSTRACT

The purpose of this phenomenological study was to explore and understand the lived experiences of Coordinators in the implementation of Senior High School (SHS) Work Immersion of Davao del Norte Division. Seven (7) work immersion coordinators have participated and undergone an In-Depth-Interview and six (6) have participated and undergone Focus Group Discussion. The study was gleaned through the Experiential Learning Theory which suggests that experiential learning is all about investigating the nature of experience and the method of learning from it. As to the participants' experiences, six (6) themes emerged: encountering obstacles in establishing industry partners, organizing documents, working closely with colleagues, administering orientation, contributing to students' needs, and fostering personal growth. With regards to their coping mechanisms, six (6) themes emerged: obtaining support from school heads, receiving support from academic network, exercising foresight and integrity, turning to community and stakeholders for assistance, securing the cooperation of the local government unit, and seeking for divine direction. Lastly, their insights revealed six (6) major themes: nurture students, cultivate strong relationship with industry partners, formulate plan of action and adhere to guidelines, augment duration of work engagement experiences, expand the community of industry collaborations, and work on personal growth. The results are believed to be significant for work immersion coordinators, school principals, teachers, students, parents, stakeholders, industry partners, and Department of Education regarding the journey of work immersion coordinators.

KEYWORDS: education, work immersion, work immersion coordinator, industry partner, qualitative-phenomenological study, Carmen, Davao del Norte.

INTRODUCTION

The world is changing quickly today, significantly impacting the labor force, and making it harder for most recent graduates to obtain work. Sending the students to work immersion will help them prepare for their careers.

In the United States of America, the challenge for school administrators is the misalignment of goals between schools and industry partners. (Henderson & Trede, 2017). However, in Vietnam, they fail to prepare students for industry demands, causing poor, unmanageable, and artificial stakeholder relationships (Ha & Duong, 2022). In Pakistan, the school's problem is training the personnel or the teachers.

Meanwhile, in the Philippines, work immersion coordinators face is the lack of an available partner industry, students, or unsure of the MOA provisions (Brillantes et al, 2019).

In Davao del Norte Division, some work immersion programs are implemented primarily to get the job done. Furthermore, work immersion coordinators have trouble finding industrial partners in various tracks within the neighborhood. Thus, they collaborate with adjacent cities.

PURPOSE OF THE STUDY

The goal of this phenomenological study was to investigate and comprehend the work immersion coordinators' lived experiences, coping mechanisms, and insights while implementing senior high school work immersion in Carmen District, Dujali District, Sto. Tomas West District, and Sto. Tomas East District in the Division of Davao del Norte.

At this point in the study, the work immersion program is a program implemented in senior high school to prepare students for college courses and future careers. It aims to build students' awareness, interest, and readiness for their preferred college courses.

RESEARCH QUESTIONS

1. What are the lived experiences of the work immersion coordinators in the implementation of work immersion in the senior high school?
2. How do the work immersion coordinators cope with the challenges encountered in implementing the work immersion in senior high school?
3. What insights can the work immersion coordinators draw from their experiences?



METHODS

This research study employed the qualitative research design. Qualitative design, as stated by Creswell (2014), is the method of learning about and appreciating the importance that individuals or human issue.

This study was conducted on thirteen (13) work immersion coordinators, seven (7) underwent in-depth interviews (IDI) in Dujali District, Sto. Tomas West District and Sto. Tomas East District and the other six (6) were subjected to focus group discussion (FGD) in Carmen District from the Division of Davao del Norte.

Further, I used purposive sampling to determine my participants in this phenomenological inquiry. As Nikolopoulou (2022) defined, the term "purposeful sampling" describes various non-probability sampling.

REVIEW OF RELATED LITERATURE

Work Immersion and Its Legal Basis

In accordance with R.A. 10533, the Department of Education implemented the Work Immersion Program, also known as "The Enhanced Basic Education Act," with the goal of improving the current curriculum and extending high school by two years. (Official Gazette.gov.ph, 2013).

Furthermore, on June 5, 2017, the Department of Education issued DepEd Order No. 30, s.2017, Guidelines for Work Immersion, which mandated work immersion in all senior high schools. (Figueras & Mendoza, 2020).

Work Immersion Implementation

In the implementation of work immersion, DepEd provides various work immersion delivery strategies from which schools can select based on their need and resources. (DepEd, 2018). "The school must make sure that the partner institutions are screened and studied to be suitable, safe and secure, and must abide by the laws, guidelines and regulations from TESDA and DOLE" (Mallari, 2019).

Common Work Immersion Drawbacks

In 2018, the program reported a few discrepancies, including suggestions of differences in the Program's workplace success

because the tasks assigned to students varied depending on their track (Brillantes, 2019).

Impact of Work Immersion on Senior High School

Throughout their work immersion, Senior High School Technical Vocational Livelihood (SHS-TVL) students demonstrate proficiency in three competencies: fundamental, core, and common competencies, and supervisors rate the students' employability as highly skilled in individual, interpersonal, self-control, initiative, and execution (Icban, 2019). In addition, the study on the performance of the graduates of the University of Rizal System in Pililla in the workplace learned that the employers were pleased with the student's performance, particularly their knowledge, general abilities, talents, and personal traits (Plantilla, 2017).

Furthermore, work immersion, improved student's preparedness level (Insorio et al., 2022). In addition, acquired additional knowledge and skills, helped them have more interest in college and learned to do their best for their career choice (Alcantara, 2019).

Roles and Responsibilities of Industry Partner

Industry partners are (1) responsible for daily oversight and coaching of students; (2) deal with student issues during immersion activities; (3) provide technical inputs to students; (4) read the students' Industrial Immersion logbook, make comments, and sign it (5); and participate in the student/s' evaluation (Everett & Silan, 2019).

Importance of Work Immersion

The rapid rate of technological development and innovation has increased educational efforts to stay up with the changing market (Tomacruz, 2018). It will be critical for newly hired individuals to have the necessary education, training, and continually updated skill sets (Smith, 2021).

In the same way, work immersion programs give students "actual workplace" experience, one strategy to address meaningful economic development providing students a combination of technical, professional, and life skills that will improve their ability to make educated career selections and expand their employment opportunities (Asian Foundation, 2018).



RESULTS AND DISCUSSIONS

Table 1

Major Themes and Core Ideas on the Experiences of the Work Immersion Coordinators in the Implementation of Work Immersion in the Senior High School

MAJOR THEMES	CORE IDEAS
Nurturing Students	loving students like how parents do maintaining close supervision of student’s academic and personal development ensuring that students feel secure and value guiding students ensuring students gain knowledge from industry ensuring appropriate placements to students career aspirations
Developing Personal Growth	learning new skills and gaining knowledge having the advantage of being trained developing confidence to interact with people. enhancing one’s ability to communicate developing strength in managing others and personal affairs.
Encountering Difficulties in Establishing Industry Partnerships	having difficulty looking for industry partners having problem in looking for linkages facing challenges scouting for more industry partners having difficulties in finding additional industry partners
Having Difficulty in Providing Students’ Needs	tackling initial challenges by personally funding students' medical expenses having to shell out personal money for travel expense providing for the students basic needs from one’s own pocket
Students’ Problem in Complying with Documents	preparing documents for student immersion collecting documents necessary for the immersion consolidating and compiling documents for submission

Nurturing Students

I must act as second parent to the children and let them feel that they are not the only ones doing it. IDI-06

We provide guidance and love our students because some parents are busy and they entrust their children to the teachers. IDI-07

Above all, we are doing this because we need to meet the needs of our students. FGD-05

Coordinators confirmed that they provide guidance and love because parents neglect to do it due to busy schedule. They act as their second parents and let them feel that they are accompanied all throughout their immersion.

For this reason, Garner (2021) claimed that mentoring students has numerous advantages. Fostering a growth mentality in children from a young age prepares them for success not only academically, but also emotionally (Cabansag, 2021).

To sum up, Joonify (2021) stated that nurturing students is essential for their personal growth, academic success, and overall well-being. Thus, nurturing unique talents creates a dynamic learning environment, promoting collaboration and mutual support among students (Jacob, 2020).

Developing Personal Growth

I have a lot of experience, especially in the first implementation of the work immersion program in senior

high school. I have learned new knowledge and skills with the specialization I monitored. IDI-01

*As a work immersion coordinator you have to build trust and confidence to convince them to accept your students. IDI-05
 You have to be very careful in handling the students. You need to have extra care because I am new in handling OJT students IDI-07*

The immersion coordinator confirmed that because of their designation, they have developed their confidence in interacting with people and have helped them to develop their strength in managing their personal growth.

In this matter, it is also essential to remember that personal development doesn’t have to be limited to job-specific skills (Mallari, 2019). Furthermore, Budomo (2020) added that encouraging personal development, such as time management, communication, or leadership training, can benefit both the individual employee and the company’s overall success. Thus, Staying ahead of the curve in today’s competitive job market requires more than just basic skills—it demands a proactive approach to learning and growth (Drummond, 2021).

Encountering Difficulties in Establishing Industry Partnerships

My experiences as a senior high school coordinator and in work immersion is a bit of a struggle especially on the first



implementation in work immersion since you are the one to look for your linkages, your partners. FGD-02

This is very challenging to increase our industry partners yearly since the school enrolment is increasing rapidly. FGD-03

I have experienced lots of challenges because it is difficult to find partners. FGD-04

Work immersion coordinators encountered common issues such as, difficulty looking for industry partners, rejected by industries, absence of partners in their community, and difficulty in finding additional industry partners to cater their students.

Cabansag (2021) added that without alignment, you may face disagreements, misunderstandings, and missed opportunities. To address this issue, you should create a formal partnership outlining the scope, objectives, deliverables, timelines, responsibilities, and measurements (Alwadhi, 2021).

Moreover, Arnolds (2021) revealed that mutual trust is vital in any collaborative effort. Even an internal project that involves collaborative working gives rise to the complexities of competition (Mahaguay et al., 2020).

Having Difficulty in Providing Students' Needs

The most difficult in my part here on Marsman is sometimes you can get money from your pocket. IDI-04

I have to spend also my own money. I help our students because they have nothing. For my travel expenses, it's from my personal money. IDI-06

One of the problems is the students' fare because the school cannot afford to provide them with the fare. IDI-07

Work immersion coordinators experienced financial constraints to provide the needs of the students especially before immersion starts and during the conduct of immersion.

Putri (2021) affirmed that the act of giving back to the community increases pleasure, health, and well-being.

Moreover, Gladstone (2021) noted that helping students or beginning regular peer support meetings can help students provide each other with information and skills in specific disciplines.

Students' Problem in Complying with Documents

My experience is hard because I will prepare, collect and keep all the documents because there is monitoring from the division office IDI-01

As coordinator, it is not easy to collect and comply with the necessary documents needed by the industry partners because many students cannot comply the complete requirements because lack of budget. IDI-0

it is hard because there are lot of things to be prepared like forms, insurance, and many more. IDI-05

Work immersion coordinators prepared, collected, consolidated, organized and submitted all the necessary documents to the Division office. They find it difficult although there is teacher in-charge for every specialization, but they are the one who will collect and ensure all documents are complete and ready when the Division office personnel come for evaluation.

The finding relates to the idea of Smith (2020) that document provides guidelines and requirements for students participating in a work immersion program. These simply indicates that students have many documents to comply to pass the immersion subject (Vitasek, 2020).

Glastone (2021) mentioned that many students struggle to submit the needed documents on time despite the importance of these documents because they need several resources and budget.



Table 2

Coping strategies of work immersion coordinators in implementing the work immersion in Senior High School.

Major Themes	Core Ideas
Obtaining Support from School Heads	<ul style="list-style-type: none"> • getting help from the principal and teacher in-charge • having a supportive principal • being motivated by our principal • getting insights from the principal • receiving help from the school head
Seeking Help from the Stakeholders	<ul style="list-style-type: none"> • relying on our local community in educating and training students in the absence of industry partners • connecting with PTA for additional support when facing needs or problems not covered by the MOOE • receiving medical support from the barangay through a health worker and a nurse • receiving financial help from the PTA • tapping the Barangay for students' transportation needs • getting help from the barangay in transporting students to and from the work immersion site • having the barangay cater the students specializing in caregiving by deploying them in different barangays
Receiving Support from Academic Community Members	<ul style="list-style-type: none"> • asking help from Colleagues • getting help from past coordinator • getting help from the immersion teacher • getting help from the senior high school coordinator • having teachers prepare students' documents and facilitate skills development
Receiving Help from the Local Government Unit	<ul style="list-style-type: none"> • collaborating with LGU to secure free medical services for students participating in the immersion • getting help from the LGU in terms of medical certificates • obtaining free laboratory exams from the LGU • getting Local Government aid for medical certificates, lab tests, and finding industry partners • receiving support from the community and LGU
Working Closely with Colleagues	<ul style="list-style-type: none"> • being helped by co-teachers • sharing the workload with other teachers • being helped by other teachers who specialized in the field. • collaborating with co-teachers
Preparing a Plan	<ul style="list-style-type: none"> • having plans and solutions for upcoming challenges to ensure a reliable support structure • planning and preparing in advance • developing a structured and visible plan
Seeking for Divine Direction	<ul style="list-style-type: none"> • praying for enlightenment and guidance • turning to prayers • trusting in God's Grace

Obtaining Support from School Heads

Our principal is very supportive. He is the one who tells us that our students are under our supervision. IDI-02

My principal keeps on motivating and updating me. I am very thankful that he updated me constantly. IDI-07

Our way to cope with those challenges is to communicate with our industry partner and getting ideas from our school head. FGD-01

My school head helped me to the extent that this year, I feel like I don't have much work anymore because he does most of it. FGD-02

The principal has helped them in doing follow-up on what to do, what documents to be complied, sent updates, and supported them in the implementation of work immersion.

Building on the importance to achieve one's goal, when it comes to enhancing student achievement, Edwards (2021)



reiterated that the school principal must give support to the coordinators in the implementation of work immersion. Principals are critical leaders in schools and for that, coordinators are most effective when they obtained support from them (Spencer, 2021).

Seeking Help from the Stakeholders

Since not all students will be catered by our industry partner. We really ask for help from LGU for the deployment of our children. IDI-01

As coordinator I experienced a lot of problems and challenges during the work immersion. In our case we really ask support from our PTA for a budget which are not allowed in our MOOE. IDI-02

In terms of the medical for our students, we ask help from our barangay health workers for the medical check-up of our students because it is quite expensive outside. IDI-03

If funds are lacking, we ask our PTA for help. IDI-06

The work immersion coordinators have experienced the full support of the barangay, Parent Teachers Association (PTA), and the community for help the students in their immersion especially on their transportation to and from the industry.

As a matter of fact, engaging the community and stakeholders is leading to providing jobs and employing capable students (Parsons, 2020). Thus, they must be involved to participate in the program (Rabinowitz, 2021). By working together, work immersion programs, community partners, and stakeholders can create a collaborative ecosystem that supports student success and strengthens the community.

Receiving Support from Academic Community Members

I cope with it by doing tasking. I call my colleagues and co-TVL teachers to help me monitor the students. IDI-02

Our senior high school coordinator helped me prepare the documents. She introduces the rules and regulations, MOU, and MOA. IDI-07

The teachers are the ones who prepare the students' documents and develop the students' skills. FGD-05

The academic community members have significant contributions to coordinators' success and turns implementation easier.

In connection, Twain (2020) posited that having a few people you trust and can turn to can help you manage everyday obstacle, make difficult decisions, and even deal with a crisis situation. Borling et al (2022) added that a strong support network is an essential tool for sustaining your mental health and wellbeing.

Receiving Help from the Local Government Unit

The local government unit also helps the students. We get free medical certificates, which cost 300 per student. IDI-05

Our local government provides assistance in the medical but only selected laboratories, but somehow helps the students. FGD-03

The same with FGD 3, our local government help with the assistance of the BHW cater the health certificate but only selected laboratories FGD-05

The work immersion coordinators and the Local Government Unit (LGU) have collaborated to the success of the work immersion to secure free medical services for students, free laboratories and helped in finding industry partners.

Beyond individual projects, cooperation between LGUs and external entities strengthens overall governance (Jacob, 2020). This collaborative approach, as evidenced in the business world where "two heads are better than one," allows for shared resources and ideas, ultimately leading to project success (Forbes, 2020).

The school needs the help of the LGU to realize the structured plan for the school, teachers, students and community (Leung, 2020). Moreover, the Local Government Unit will be aware of the needs of the community through collaboration with the school (Harry, 2020).

Working Closely with Colleagues

I asked help from other teachers. I assigned a coordinator in every specialization. The flow of our last immersion two (2) years ago runs smoothly because I only monitor the for each specialization. IDI-02

We have divided the work. I put in-charge in every specialization. IDI-03

So, I assigned a teacher in every specialization. They will be the one to prepare the documents. (IDI-05)

Well, in terms of preparation, we collaborate with other teachers. FGD-03

The coordinators worked among their co-workers in achieving common goals. They have shared their workloads and collaborated in solving problems of immersion.

In relation to this, positive relationships with colleagues can provide emotional support and motivation, especially during challenging times (Mello, 2020). Encouragement from peers can boost morale and help individuals overcome obstacles more effectively. Thus, when colleagues collaborate seamlessly, tasks can be delegated and completed more efficiently, leading to better outcomes (Blant, 2020).

In addition, Twain (2020) posited that interacting with colleagues can expose individuals to new perspectives and approaches. This exposure can facilitate personal and professional growth by encouraging individuals to step outside their comfort zones and learn from their colleagues (Jacob, 2020).

Preparing a Plan

When challenges come, you should have plan A and plan B to have solutions as if you have something to rely on. IDI-03

I will plan ahead of time, proper planning, and preparation so that I can create detailed plans IDI-05

You really have to establish and develop a structured and visible plan from the pre-implementation to have a very smooth flow of implementation. FGD-06



Prior to the conduct of the immersion, the work immersion coordinators have secured their plan to prepare what to be done before, during and after the immersion program to guarantee the implementation's success.

In the context of this idea, Troos (2021) explained that prior to implementation, planning ahead takes place. Plans can be created to handle possible future scenarios, so that the company is prepared for any situation with a list of resources (Edwards, 2021). Furthermore, Dela Cruz (2017) cited that planning helps in setting appropriate goals, increases efficiency, reduces risk, and increases certainty and confidence.

Planning is significant as it directs what to do, what resources to be used, what are the things to be prepared and how to implement the plan (De Guzman et al, 2019).

Seeking for Divine Direction

Pray for enlightenment about what to do because if you bring students, you have many things to be considered. You have to

look after them not just being proud of yourself because you deploy them to immersion. IDI-01
The first thing I did when I felt heavy on my experiences as work immersion coordinator, I pray and light a candle. IDI-04
Through the grace of God. IDI-06

Coordinators have sought divine direction from God that leads them to the exact way to go and achieve an aim. They said that sometimes, during their work immersion in the Senior High school, one of their weapons is seeking and asking for divine direction.

Seeking divine direction is one of those realities that we think we grasp until we are called upon to do it, and then we realize there is more to it than we knew (Miles, 2021). However, Masire et al (2020) confirmed that by seeking God's providence, we will never be exposed that disturb our tranquility.

Table 3
Major Themes and Core Ideas on the Insights of Work Immersion Coordinators in the Implementation of Work Immersion Program in the Senior High School

Major Themes	Core Ideas
Working on Personal and Professional Growth	<ul style="list-style-type: none"> • dedicating oneself to tasks and maintain a positive outlook • developing social skills and emotional intelligence • being open-minded • ensuring preparedness for yourself and students • being flexible • enhancing one's problem solving skills
Formulating Plan of Action and Adhere to Guidelines	<ul style="list-style-type: none"> • adhering to the directives issued by the Department of Education • adhering strictly to the work immersion guidelines in all your actions • endeavoring for a thorough planning • establishing contingency plans • developing and adhere to a structured plan
Cultivating Strong Relationship with Industry Partners	<ul style="list-style-type: none"> • establishing good relationship with teachers, students, and industry partners • establishing a strong support network and foster camaraderie with industry partners • improving collaboration and strengthen ties with industry partners • conveying industry partners the competencies students need to acquire
Expanding the Community of Industry Collaborations	<ul style="list-style-type: none"> • increasing the network of industry partners • aspiring to collaborate with additional industry partners • increasing the number of industry partners
Augmenting Duration of Work Engagement Experiences	<ul style="list-style-type: none"> • extending the duration of work immersion hours to enhance learning outcomes. • increasing the number of hours for work immersion • increasing the duration of the immersion program to allow students to fully engage with the work experience.



Working on Personal and Professional Growth

You should really be committed to your work to what you have done, be optimistic, and continue to give what's best for them IDI-01

As a work immersion coordinator, you should be alert and updated. You should be active to DepEd's guidelines. IDI-02 you must be open minded. open and accept your colleagues' feedback or complaints and openly discuss the problems. IDI-03

For me, the work immersion coordinator has a big role because you need to prepare yourself and the students to be deployed. FGD-02

Adaptability. You must adapt to unexpected changes in the work immersion process. FGD-04

One of the learnings that I can share as immersion coordinator is increase your problem-solving abilities because we don't know when the problems strike. FGD-06

Participants confirmed that being committed, optimistic, open-minded and discuss openly the problems help maintain a healthy environment for the students.

Furthermore, Willis (2020) emphasizes the importance of personal development in the workplace for unlocking your full potential and becoming the best version of yourself. Individuals who continuously strive for improvement tend to achieve greater career success. This ongoing process benefits not only your career but also other aspects of your life. Setting personal goals is a great first step in your self-improvement journey.

In particular, personal development ensures you possess relevant job-field skills and increases your marketability to potential employers. It also paves the way for advancements within your industry. This is particularly valuable for those seeking managerial positions or promotions. By continually investing in your development, you demonstrate your value as a team member eager to learn (Smith, 2021). This commitment is highly valued by employers and opens doors to career advancement opportunities (Parsons, 2020).

Formulating Plan of Action and Adhere to Guidelines

I was able to realized the DepEd target for our learners because I followed what is mandated. I sent the students to the partner industry to enhance and strengthen their skills. IDI-02

There should be a guidance, or you should be guided with the work immersion guidelines. You should anchor on it. IDI-03

This work immersion must be carefully planned in the sense that, as what FGD 5 said, it is a risky program. Many risks may happen to the students, and this calls for careful planning beforehand. Secure that everything will go smoothly and the safety of the students should be considered. So, if there will be one thing that needs in the implementation of work immersion is that careful planning. FGD-01

Since the enrolment of our school is increasing rapidly, we need to look for more industry partners to cater all our

students because many establishments will only cater 10 learners, and yet many schools also send their students to be immersed. So we need back up. FGD-03

Everything will be done when there is planning. The activity should be in accordance with the matrix that has been planned. When you follow your plan, nothing happens unpleasantly. FGD-05

To ensure success of immersion program implementation, planning should be done before implementation. Thus, work immersion coordinators have developed plan of action that adheres to Department of Education guidelines.

Glasow (2020) highlights that involving people in creating action plans fosters ownership and accountability. This collaborative approach ensures practical proposals and a clear understanding of assigned tasks. Arnolds (2021) emphasizes that a well-defined plan is essential for achieving goals.

Action plans provide a clear roadmap to success, allowing for a realistic assessment of timelines and resource allocation (Efron, 2020).

Cultivating Strong Relationship with Industry Partners

As a work immersion coordinator, you should know how to deal with the teachers, students, and your partner industry and connect with them and establish good relations and avoid the burden of finding new partners. IDI-02

Building a strong support system and camaraderie for both the school and the industry partners play a vital role in molding the students in terms of their knowledge, skills, and attitude. FGD-03

One thing that should be improved is we have to foster strong collaboration with our industry partners and maintain our relation to them so that they will still accept us on the following years. FGD-04

There should be clear communication about what competency the industry must provide for the students to attain during their immersion. FGD-06

Coordinators attested that cultivating a strong relationship with industry partners is a big help for them and their work immersion program to provide students more chances to expand their horizons by applying their skills in the right and appropriate industry.

Meanwhile, by cultivating a close relationship with an industry partner, individuals can tap and get big impact on their own professional development (Anderson, 2021). Individuals can gain access to this expertise and broaden their understanding of the industry by developing good relationships with them (Harry, 2020).

Expanding the Community of Industry Collaborations

There should be more partner industries in the locality so that the students will not be send by batch during their work immersion. IDI-02

Maybe more industry partners or linkages to have better exposure of our students. There should be more industry



partners so that we can divide our students where to place them. IDI-05

We should expand the partnership between the school and the community with our stakeholders because sometimes it seems like it's just limited to only few partner industries. IDI-06

Work immersion coordinators confirmed that having community and industry partners is paramount to the success of the implementation. This is one of the realizations of the participants that we must expand our collaborations with the community and industry partners to divide the students where to deploy them. To expedite the immersion of Senior High School students, immersion coordinators hope to expand and engage with more industry partners to deploy all of their students at once rather than in batches or groups due to a restricted number of partners. It would reduce the number of days that coordinators would have to leave the school to monitor their pupils outside, allowing them to complete the immersion in a single batch for each industry.

Strategic alliances can significantly accelerate progress (Haines, 2021). Collaborative ventures often lead to cost reductions and increased value for all parties involved (fact check this point). Industry partnerships can also enhance brand reputation by leveraging a trusted partner's positive image (Vitasek, 2020). These win-win scenarios fuel long-term success when nurtured effectively.

Furthermore, partnerships between educational institutions and industry are mutually beneficial (Pappas, 2021). Students gain exposure to real-world practices, develop career readiness, and bridge the gap between theoretical knowledge and practical skills. Industry collaboration, through these learning opportunities, empowers students with practical experience.

Augmenting Duration of Work Engagement Experiences
Increase the number of hours. There should be more time for work immersion not only 80 hours. IDI-02

In improving the work immersion, the time given to students should be increased. IDI-03

The number of hours should also be increased. Maybe about 300 hours depending on the number of hours the students will report. IDI-05

Coordinators affirmed that having more and enough time for work engagement is essential to the development of students to demonstrate their abilities and potentials on their chosen profession.

Everything changes, so does your perception of yourself and the world around you. You must be adaptable and willing to change your situation (Leung, 2020). Low employee engagement can be caused by a variety of causes, including a lack of recognition from management, poor company communication, and a lack of awareness of the firm's mission and engagement activities (Franz, 2020).

CONCLUSION

This study explored the lived experiences of work immersion coordinators in senior high schools. By focusing

on this under-researched perspective, the research offers valuable insights into the program's implementation. The coordinators, through in-depth interviews, revealed the challenges they navigate and the coping mechanisms they employ. Their experiences highlight the importance of working on personal and professional growth, formulating plan of action and adhere to guidelines, cultivating strong relationship with industry partners, expanding the community of industry collaborations, and augmenting duration of work engagement experiences. These insights can be shared with other coordinators and stakeholders to improve future work immersion experiences for students.

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USE OF JOURNAL WRITING AS A TOOL OF LEARNING IN SCHOOL EDUCATION

Dr. Md Shahzad Manzar

Assistant Professor, Department of Education, R.K. College, Madhubani, Bihar

ABSTRACT

This article focuses on the importance of journal writing for school and pupil teachers. We write journals for multiple reasons induced by different motives like to capture some events or experiences, want to narrate something of significance, to retrospect our reactions or feelings in different circumstances, to develop writing skills, etc. Sometimes we write informally because of our interests, sometimes we have to write formally in a formal setting. Journals can be written in various fields according to our needs. In other words, journals can be written in many different contexts e.g., Academic or scholarly journals, which are professionally written by researchers or scholars of a single discipline or sub-discipline for a specific audience who knows the terminology of that discipline. Academic journals are focused on providing information to their audience about original research or new findings in any particular field of research. Generally, the articles of academic journals have been peer reviewed which means it is reviewed by experts of that particular field, example - Nature, Annals of Internal Medicine, African Journal of food Science etc.; its article will address journal writing in the field of school education and how it can be helpful for the professional development of a pupil teacher. When we use journal writing as a tool of learning in school education it can be beneficial for both student and pupil teacher.

KEYWORDS: *Journal writing, Reflective writing, Importance of Journal writing.*

INTRODUCTION

A journal is a record or written account of one's daily activities, learning, experiences, ideas or research kept regularly in a systematic order. Or it could be a record of one's thoughts about one's learning within a professional setting. It is written regularly over a specified duration of time. In journals, one does detailed reading, describes events, experiences and issues related to one's study or professional course and analyses or reflects on them. There are many aspects associated to journal writing in relation to learning. In reference to learning, the journal is both the place where the events or experiences are recorded as well as the forum in which they are refined and reformed. This processing aspired to recognize or make sense of happenings that results as a base for new experiences that will in turn support new learning.

USING JOURNAL WRITING TO ENHANCE REFLECTIVE PRACTICE

As I mentioned before, using journal writing in the school curriculum is a kind of reflective practice. Journal writing can foster reflection and enables students to express feelings regarding their educational experiences. The format of this writing can vary depending on the student's needs and the instructor's goals. It involves taking the unprocessed raw data of experiences and engaging with it to make sense of what has happened, exploring often chaotic and confusing events and focusing on the thoughts and emotions that accompany them. Writing to reflect comprises a cyclic pattern of reflection first reflecting on experiences before or as you write, and then reflecting on the journal entries themselves at some later stage which may provide material for further reflection and writing, and so on.

The idea is that journal writing provides opportunity for teachers to use the writing process to describe and explore their own practices. The goal of reflective action in this way to allow the students the opportunity to know their conceptions and allow them to take charge of their learning. Learning through the inducement of reflection, this type of journal writing enables learners to become active participants in the learning process through active involvement and personal ownership of ideas, thus enhancing the quality of learning. Learners can develop problem-solving skill which foster the exploration of self-constructs of meaning. Reflective journal writing is viewed as a significant tool to develop student's insight into taught concepts. The journals provide a forum for pupil teacher to explore how teaching was articulated and the extent to which feedback of it enhanced the quality of the learning experience.

Reflective journal as performing two primary objectives, namely, the documentation of events and ideas for later reflection and as a process of triggering insight about teaching/learning through self - discovery. Topical issues explored extent from classroom events leading to subjective observation and prospective analysis and reassessment as well as to share insight with other learners. Good reflective writing is said when we try to question and explore every feeling, fact, idea and vulnerability regarding any event and see what we can learn from it. It should be analytical not judgemental and seeking the essence of wisdom, we can get from it.

QUESTIONS WHICH CAN HELP US IN REFLECTIVE WRITING-

- What is my learning?



- Am I able to apply these learning in future?
- Am I completely comfortable in that situation?
- If I was uncomfortable so what were the causes of my discomfort?
- Am I responded rightly according to the situation?
- What could have been the worst-case scenario?
- Was anything escaped from my viewpoint?
- Was there anything that surprised me?
- Was there anything which I haven't been able to relate with my previous understanding?

These types of questions will help us to understand or articulate our thoughts and see a situation from every possible angle or in other words, it can give us different perspectives of seeing a situation.

How To Write?

We have known that writing a journal in the school curriculum is a kind of reflective practice for both students as well as teachers. Although it is a writing, but it doesn't mean that you will directly go on paper and write your reflective thoughts. A good reflective journal is written when you write in a systematic manner. Firstly, you must write a descriptive detail of what has happened, then analysis of that descriptive information or reflect on what has happened, then what you have learned from it or you conclude your learning outcome.

We can say that writing a reflective journal include three steps which are:

1-DESCRIBING THE EVENT

It involves detailed description of what exactly has happened like, what was going on? Who were involved? What activities takes place? Who were active? Who were passive? What have I done? What have they done? How the whole situation was? Is there anything which has been escaped from my sight? You write detail information about your whole experience.

2-ANALYSIS OR REFLECTING ON IT

Now you have to reflect on that descriptive information, you have to break down your experiences into small segments then analyse them in a way that you could take a look of it from every possible angle or you would able to see it from different perspectives. During this process, you must ask yourself questions like, what were your intentions. What were the sentiments aroused that time? What I have been perceiving? Was there anything which surprised or annoyed me? Was any prejudice of mine affecting the situation? Am I responded well according to my role? In this process you need to explore your mind that why you behaved in a certain way or things you did unconsciously, you interpret things and meet different aspects of it.

3-CONCLUSION OR LEARNING OUTCOMES

In this segment you conclude whole analysis of your experience or what you have learned from your reflective writing you did before. You write useful information which you can use by comparing it with similar or dissimilar future situations.

IMPORTANCE OF JOURNAL WRITING FOR SCHOOL/PUPILTEACHER

We can use journal writing in school curriculum, as record of school events, teacher can use it for their self-development, and he/she also can encourage journal writing among students and use it to assess the growth in understanding of students about any specific subject, it also can be used to understand student's conceptions, thus teacher can help students according to their psychological needs. Student can write it to get better understanding of their subjects, to express their ideas related to a particular thing, to articulate their thoughts, to develop writing skills because personal or dialogue journal writing focuses on meaning rather than grammatical mistakes. It encourages the free flow of thoughts and ideas. Journals are not assessed in a sense of grading unlike other school assignments. It encourages self-reflection and confidence in their writing skills. Writing itself a cathartic process it helps to release one's intense suppressed emotions like fear, anxiety, sadness, stress, anger, frustration etc. on paper. Journal writing is also a kind of writing process which gave a space to students for relieving their emotional turmoil, sometimes when they revisit their writing or reflect on it, they can find solutions of their problem.

Teacher can use it as a feedback tool of their teaching if they encourage students to write journals of their subjects to examine that they are successful in achieving their teaching-learning goal or not? If they aren't then it can also help to find out the causes of it. Through journal entries teacher can assess the academic performance of a student and give them feedback or instruction for improvement individually. Teacher should systematically introduce journal writing to their students. Sample of journal writing should be shown, the methodology should be taught to the students, and time should be set for feedback from teacher. Then it may work the we wanted, at some extent. There are other factors involved which can affect this process like, it consumes time a lot, students may take it as an extra burden on them, sometime they may feel lazy to write, they lack commitment to it because it is not their formal school work and so on. Unfortunately, it shows a contrast picture but if teacher try to inspire or motivate their students, show them a clear picture of its advantages with positive results then they could take interest in journal writing. Another way of encouraging students to write journals is to start with interesting topics or creative writing prompts e.g., inspirational people, motivational quotes, topics of their interest, gratitude journal etc. This is the way by which teacher can help students to seek positive aspects into it and inspire students to overcome their problems.

It could be a means of communication between student and teacher, a type of dialogue journal in which students write to express themselves on a topic of their interest which they want to share with someone else like their friends, class fellows or teachers. The purpose of whole schooling is the proper development of child in every aspect. For this a good assessment of the child or student is needed, journal writing can be used as a tool of assessing them. School should keep its own journal of each event organized in school premises. It is the responsibility of school management to retrospect it in a way



that were students get benefited by those events? Were they beneficial in any form or just wasteful? What is the learning we can get from it for future reference? Each activity which takes place in school can be written on school journal and after that reflection should be done on it.

Both student and pupil teacher can be considered as a learner in teaching-learning process. There are number of benefits for which journal can be written as a learner, these include:

- To enable learner to understand their own conceptions.
- Reflective journal writing is done in a systematic framework in which pupil teachers can understand, analyse and reflect on their professional skills in a descriptive manner.
- It can help student and pupil teacher both to think creatively on any issue they are facing, using reflective or intuitive understanding.
- It provides an opportunity to those students to express their ideas, thoughts, or feelings who are not good at expressing themselves verbally, it works like a substitute to know their conceptions.
- It can help to facilitate critical thinking in both student and pupil teacher.
- Learning outcome they get from it, can help them in future situations.
- Journal writing of any particular school subject can strengthen their knowledge and understanding that subject. They will be able to identify that where the difficulty occurring, where they are lacking or stuck up.
- Learners find a systematic way (through journal writing) to evaluate their learning outcome by themselves.
- Here teacher evaluate student's writing focusing on thoughts they have conveyed not grammatical errors, and this evaluation or feedback is for learning not for grading or marking. So, student can write freely without worrying about grammatical mistakes and marks or grade.
- It helps teacher to get better understanding of their students individually. In a subject specific journal, teacher can use it to know what students have understood and what they have not, if not then where their teaching lacks.
- It can be used as a tool to enrich vocabulary, to improve writing skill and to clarify thinking. • It can encourage students to involve actively in the learning process. It helps students to relate what they have learned to what they already know.

Conclusion

We are confronted with different types of scenarios in our day-to-day interactions with society. Some instances catch our attention and most of them get neglected by us, sometimes these subtle moments create a difference and we are not even aware of it. It is okay in many ways but when it comes to a professional setting it can create a gap e.g., in the teaching-learning process, this neglecting attitude can create a learning gap. Sometimes teachers would not give proper attention to the child's behaviour or activity, sometimes they don't even think about their teaching methods (that is it good or not?), sometimes students lack attention about what they are actually learning, sometimes school management lack attention towards students (are they progressing or student?). This type of inattentiveness can affect the all-around development of the

student. If journal writing is introduced to school curriculum (for school, for teachers, and for students also) not in a forcible manner but as a tool of improvement it can solve the problem of negligence at some extent.

For school curriculum, mostly reflective type of journal writing is used, because when school, students and teachers reflect on their previous learning then they will be able to use it the betterment of future learning situations or other curricular activities. So, if we reflect on our psyche, mental processes, and emotions through reflective journal writing it could bring a change or improvement in our way of perceiving things or working methods etc. What we need to do is reflect on ourselves critically putting our prejudices aside, putting our inner discomfort on paper is difficult if we have to reveal it in front of others. Therefore, we should keep it private and regularly assess ourselves through it and take learning out of it if you are a teacher. If you are a student, you can show it to your teachers and take feedback from them. Journal writing should be taken as a learning tool. Each journal is unique itself because it is subjective in nature and many learning can be taken out of one incident or one incident can be seen from different perspectives.

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A STUDY ON EFFECT OF WORK INTEGRATED LEARNING PROGRAMS AND EMPLOYABILITY AMONG GRADUATES

Dr. M. Suresh¹, Anita Ananda²

¹Assistant Professor, CMS Academy of Management & Technology, Chinnavedampatti, Coimbatore - 49, Tamil Nadu, India.

²Ph.D. Research Scholar, CMS Academy of Management & Technology, Chinnavedampatti, Coimbatore - 49, Tamil Nadu, India.

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ABSTRACT

The increasing gap between academic knowledge and practical workplace skills has emphasized the importance of Work Integrated Learning (WIL) programs. These programs, encompassing internships, co-op programs, and industry projects, aim to enhance graduates' employability by integrating real-world experience with academic studies. This study investigates the effect of WIL programs on employability among graduates, focusing on key objectives: evaluating the impact of WIL on employability skills and identifying factors contributing to the success of WIL programs, and proposing recommendations for optimizing these programs. Utilizing secondary data and a comprehensive literature review, the findings reveal that WIL programs significantly improve employability skills and job acquisition rates. Graduates who participate in WIL programs are more likely to secure employment and find jobs relevant to their fields of study. This research underscores the value of WIL programs in preparing graduates for the workforce and provides actionable insights for educational institutions and policymakers to optimize WIL implementation.

KEYWORDS: Work Integrated Learning (WIL), Graduates Employability, Industry Partnerships, Career Readiness, Workforce Preparation, Experiential Learning

I. INTRODUCTION

In today's rapidly evolving job market, the gap between academic knowledge and practical workplace skills has become increasingly evident (Jackson, 2016; Rowe & Zegwaard, 2017). Work Integrated Learning (WIL) programs have emerged as a promising solution to bridge this gap, offering students the opportunity to gain real-world experience while still pursuing their studies (Helyer & Kay, 2015; Ferns & Zegwaard, 2014). WIL encompasses various forms of experiential learning, including internships, co-op programs, industry projects, and practicum placements, which are integrated into the academic curriculum (Smith et al., 2009; Cooper et al., 2010). These programs are designed to enhance students' employability by providing hands-on experience, fostering professional skills, and building industry connections (Billett, 2011; Jackson, 2015).

The importance of WIL programs is underscored by the growing demand for graduates who are not only academically proficient but also possess practical experience and employability skills (Cameron & Browne, 2011; Tran, 2016). Employability, in this context, refers to the ability of graduates to secure and succeed in relevant employment, which is increasingly influenced by the skills and experiences gained through WIL (Jackson & Wilton, 2016; Yorke, 2006). As such, understanding the impact of these programs on graduates' employability is crucial for educators, employers, and policymakers alike (McCarthy et al., 2017; Smith et al., 2014).

The global shift towards a knowledge-based economy has

further emphasized the need for graduates who can effectively apply theoretical knowledge to practical situations (Dressler & Keeling, 2011). Employers increasingly value graduates who can demonstrate not only discipline-specific knowledge but also transferable skills such as communication, problem-solving, and teamwork (Coll & Zegwaard, 2006; Freudenberg et al., 2011). WIL programs offer a unique opportunity for students to develop these skills in authentic work environments, thereby enhancing their overall employability (Rowe & Zegwaard, 2017; Jackson, 2013).

Furthermore, the rapid pace of technological advancement and changing industry practices have created a dynamic job market where adaptability and continuous learning are essential (Billett, 2014; Oliver, 2015). WIL programs can play a crucial role in preparing students for this reality by exposing them to current industry practices and fostering a mindset of lifelong learning (Ferns et al., 2014; Smith & Worsfold, 2015). By engaging in real-world projects and collaborating with industry professionals, students can develop a better understanding of their chosen field and make more informed career decisions (Zegwaard & Coll, 2011; Reddan, 2017).

The benefits of WIL extend beyond individual students to encompass educational institutions and industry partners. For universities, WIL programs can enhance curriculum relevance, strengthen industry partnerships, and improve graduate outcomes (Patrick et al., 2008; Martin et al., 2012). For employers, these programs provide access to a pool of potential talent, contribute to workforce development, and foster



innovation through academic-industry collaboration (Atkinson et al., 2015; Rampersad, 2015).

Despite the recognized importance of WIL, there are challenges in implementing and scaling these programs effectively. These include ensuring quality and consistency across different WIL experiences, addressing equity and access issues, and aligning WIL activities with academic learning outcomes (Orrell, 2011; Winchester-Seeto et al., 2016). Additionally, the impact of WIL on employability can vary depending on factors such as program design, duration, and integration with the curriculum (Jackson, 2015; Silva et al., 2018).

This study aims to explore the effect of WIL programs on the employability of graduates, focusing on how these programs contribute to the development of key competencies, improve job prospects, and enhance career readiness. By examining existing literature and empirical evidence, this research seeks to provide insights into the effectiveness of WIL programs and offer recommendations for optimizing their implementation to better serve the needs of both students and the labor market (Lester & Costley, 2010; Billett, 2016).

II. REVIEW OF LITERATURE

Work Integrated Learning (WIL) programs have garnered significant attention in academic research due to their potential to enhance graduate employability. This literature review explores the various dimensions of WIL programs, their impact on employability, and the factors influencing their effectiveness.

1. Definitions and Frameworks of WIL

Work Integrated Learning is a broad term encompassing various experiential learning opportunities that integrate academic learning with practical work experience (Jackson, 2015). According to Smith et al. (2008), WIL includes internships, cooperative education, industry placements, and project-based learning. These programs are designed to provide students with real-world experiences that complement their academic studies, thereby bridging the gap between theory and practice.

2. Impact on Employability

Several studies have highlighted the positive impact of WIL programs on graduates' employability. For instance, a study by Helyer and Kay (2015) found that students who participated in WIL programs exhibited higher levels of employability skills, including problem-solving, communication, and teamwork. These skills are crucial for securing and succeeding in the job market. Similarly, Jackson (2016) reported that WIL participants were more likely to gain employment within six months of graduation compared to their peers who did not engage in such programs.

3. Development of Key Competencies

WIL programs are instrumental in developing key competencies that are highly valued by employers. According to a study by Billett (2011), WIL experiences help students develop industry-specific skills and a deeper understanding of

professional practices. Moreover, employers often regard practical experience as a key indicator of a graduate's readiness for the workforce (Cameron & Browne, 2011). This aligns with the findings of McCarthy and McCarthy (2016), who emphasized that WIL programs contribute significantly to the development of critical thinking, adaptability, and interpersonal skills.

4. Factors Influencing the Effectiveness of WIL

The effectiveness of WIL programs can be influenced by various factors, including the quality of the placement, the level of support provided by academic institutions, and the alignment between academic content and practical experience (Billett, 2016). According to McCarthy et al. (2017), successful WIL programs are characterized by strong partnerships between educational institutions and industry, well-structured learning outcomes, and continuous feedback mechanisms.

5. Challenges and Limitations

Despite the benefits, WIL programs also face challenges and limitations. For example, a study by Billett and Choy (2018) highlighted issues related to the variability in the quality of WIL experiences and the lack of adequate support for students. Additionally, some employers may have limited capacity to provide meaningful learning experiences, which can affect the overall effectiveness of the program (Jackson & Wilton, 2016).

6. Future Directions

Future research should focus on addressing these challenges and exploring innovative approaches to enhance the effectiveness of WIL programs. For instance, integrating digital tools and virtual internships could offer new opportunities for experiential learning (Lester & Costley, 2010). Additionally, longitudinal studies examining the long-term impact of WIL on career progression would provide valuable insights into the sustained benefits of these programs (Smith et al., 2016).

III. OBJECTIVES

1. To Evaluate the Impact of Work Integrated Learning (WIL) Programs on Graduates' Employability Skills
2. To Analyse the Relationship Between WIL Program Participation and Job Acquisition
3. To Identify the Factors Contributing to the Success of WIL Programs
4. To Propose Recommendations for Optimizing WIL Programs

IV. RESEARCH METHODOLOGY

Research Design

This study employs a descriptive and analytical research design, focusing on secondary data and literature review. The aim is to synthesize existing research and empirical evidence to understand the impact of Work Integrated Learning (WIL) programs on graduate employability.

Data Collection

Secondary Data: Data gathered from existing academic literature, industry reports, and case studies relevant to WIL programs and graduate employability. Sources include peer-



reviewed journal articles, books, and reputable online databases.

Review of Literature: A comprehensive review of literature conducted to identify and analyze previous studies, theoretical frameworks, and empirical findings related to WIL programs.

Data Analysis

Thematic Analysis: The literature review involves thematic analysis to categorize and interpret the key themes related to the effectiveness of WIL programs. Themes include employability skills development, job acquisition rates, success factors, and challenges faced by WIL programs.

Comparative Analysis: Comparative analysis used to evaluate and contrast findings from different studies and reports. This helped in identifying patterns, differences, and similarities in the impact of WIL programs across various contexts and disciplines.

Limitations

The analysis limited to secondary data and literature, which may not fully capture the most recent developments or specific local contexts.

Work Integrated Learning (WIL) has emerged as a key educational strategy aimed at enhancing the employability of graduates by integrating practical work experience with academic learning. This section of the analysis explores the relationship between WIL programs and employability outcomes, drawing on a broad range of secondary data and literature.

V. RESULTS AND DISCUSSION

1. Impact of Work Integrated Learning (WIL) Programs on Graduates' Employability

Kolb's Experiential Learning Theory (1984) underpins the concept of WIL, emphasizing the importance of learning through experience. Kolb's model posits that knowledge is created through the transformation of experience, suggesting that WIL programs enhance learning outcomes by providing practical experiences that reinforce academic knowledge.

Development of Key Competencies - WIL programs are designed to enhance various employability skills. Research by Jackson (2015) and Helyer and Kay (2015) demonstrates that participation in WIL leads to significant improvements in competencies such as problem-solving, communication, and teamwork. For instance, students who engage in internships or co-op programs develop a deeper understanding of industry practices and refine their technical and interpersonal skills (Billett, 2011).

Case Studies and Empirical Evidence - A review of empirical studies reveals that WIL programs have a positive impact on graduates' skillsets. For example, a study by Cameron and Browne (2011) found that graduates with WIL experience reported higher levels of confidence in their job-related skills compared to their peers. Similarly, McCarthy and McCarthy

(2016) highlight that WIL participants demonstrate enhanced critical thinking and adaptability, which are crucial for career success.

Enhanced Professional Skills - The literature indicates that WIL programs provide practical experience that complements academic learning, leading to better-developed professional skills. Billett (2011) notes that WIL participants gain a deeper understanding of industry practices and expectations, which translates into increased proficiency in professional tasks and responsibilities.

The findings suggest that WIL programs effectively bridge the gap between theoretical knowledge and practical application. By providing real-world experiences, these programs allow students to develop and refine skills that are crucial for career success. The improvement in employability skills is consistent with the theoretical framework of experiential learning (Kolb, 1984), which posits that hands-on experience enhances learning outcomes. This underscores the value of integrating practical work experience into academic programs to better prepare graduates for the workforce.

2. Relationship between WIL Program Participation and Job Acquisition

Enhanced Employment Rates - Numerous studies have shown a positive correlation between WIL program participation and higher employment rates among graduates. Jackson (2016) reports that graduates who have completed WIL programs are more likely to secure employment within six months of graduation. This is supported by research from Cameron and Browne (2011), which highlights that WIL participants experience higher job acquisition rates compared to their peers without WIL experience.

The positive correlation between WIL participation and higher employment rates is indicative of the practical benefits these programs provide. Graduates who have engaged in WIL activities such as internships, co-op programs, and industry projects often find themselves more attractive to potential employers. This is because WIL programs allow students to acquire hands-on experience, which not only complements their academic knowledge but also demonstrates their ability to apply theoretical concepts in real-world settings.

Employers tend to favour candidates who have demonstrated their capabilities in a work environment, as it reduces the training and adaptation period typically required for new hires. Jackson (2016) highlights that the practical skills and industry insights gained through WIL programs can significantly shorten the transition period from academia to employment, resulting in quicker job placements. This benefit is particularly crucial in competitive job markets where graduates must differentiate themselves from a large pool of candidates.

Improved Job Relevance - In addition to higher employment rates, WIL programs contribute to improved job relevance for graduates. McCarthy and McCarthy (2016) emphasize that graduates with WIL experience are more likely to secure positions that closely match their academic training and career



aspirations. This alignment is crucial for several reasons.

First, job relevance enhances job satisfaction and retention. Graduates who find roles that match their field of study are more likely to feel fulfilled and motivated in their careers, leading to higher job satisfaction and lower turnover rates. This is beneficial not only for the graduates but also for employers, as it reduces the costs associated with recruitment and training.

Second, job relevance ensures that graduates can leverage their specialized knowledge and skills effectively. When graduates enter roles that are aligned with their academic background, they can contribute more meaningfully to their organizations, driving innovation and productivity. This, in turn, reinforces the value of WIL programs in preparing students for specific industry needs.

Practical Experience and Job Market Competitiveness - The practical experience gained through WIL programs enhances job market competitiveness. Graduates who have participated in WIL programs are often better prepared for the demands of the workplace. They possess a blend of academic knowledge and practical skills, which is highly valued by employers. This combination allows them to hit the ground running and add value to their organizations from day one.

Moreover, WIL programs often involve exposure to industry-specific tools, technologies, and practices. This exposure ensures that graduates are up-to-date with the latest developments in their field, making them more adaptable and innovative. As industries continue to evolve rapidly, the ability to stay current and adapt to new trends is a critical employability factor.

Networking and Industry Connections - WIL programs also facilitate networking and the development of industry connections, which play a significant role in job acquisition.

Through internships, co-ops, and industry projects, students interact with professionals and potential employers, building relationships that can lead to job offers and career opportunities. Networking is a powerful tool in job hunting, and WIL programs provide a structured way for students to establish these valuable connections.

Research by Smith et al. (2016) indicates that students who participate in WIL programs often receive job offers from their placement organizations or through contacts made during their WIL experiences. This direct pathway to employment highlights the strategic advantage of WIL programs in bridging the gap between education and employment.

The analysis indicates that WIL programs not only improve the likelihood of employment but also increase the alignment between graduates' jobs and their academic qualifications. This relationship supports the notion that practical experience gained through WIL enhances job market competitiveness and career readiness. Graduates who participate in WIL programs

are better equipped to secure relevant employment quickly, achieve job satisfaction, and contribute effectively to their workplaces.

3. Factors Contributing to the Success of WIL Programs

Quality of Industry Partnerships - Industry partnerships are the cornerstone of successful WIL programs. These collaborations facilitate the creation of real-world learning environments where students can apply theoretical knowledge to practical challenges. According to Billett (2016), high-quality industry partnerships are characterized by active engagement from industry professionals who are committed to mentoring and guiding students. This engagement ensures that students gain insights into industry standards, practices, and expectations, which are crucial for their professional development.

Patrick et al. (2008) emphasize that strong partnerships involve clear communication and mutual understanding of goals between educational institutions and industry partners. Such partnerships are often formalized through agreements that outline the roles and responsibilities of each party, ensuring that students' work experiences are structured and aligned with academic objectives. Galloway and Jenkin (2005) further illustrate that industry partners benefit from these collaborations by gaining access to a pool of potential future employees who are well-prepared and familiar with their organizational culture.

Academic Integration and Support - Successful WIL programs integrate academic learning with practical work experience and provide comprehensive support to students. Jackson and Wilton (2016) highlight those programs with well-structured learning outcomes, continuous feedback, and academic support yield better results. This integration helps students apply theoretical knowledge in real-world settings and enhances their overall learning experience.

Furthermore, research by Smith et al. (2009) indicates that academic support, including mentorship and regular feedback, plays a crucial role in the success of WIL programs. Students who receive guidance and support from both academic and industry mentors are more likely to navigate the challenges of the workplace effectively and achieve better learning outcomes. Moreover, Coll and Zegwaard (2006) emphasize the importance of reflective practices and assessment methods that align with WIL objectives to ensure that students can critically evaluate their experiences and continuously improve their skills.

The integration of academic learning with practical work experience is essential for maximizing the benefits of WIL programs. Jackson and Wilton (2016) highlight that well-structured WIL programs are designed to seamlessly blend academic coursework with work placements, allowing students to contextualize and apply their learning in real-world settings. This approach not only reinforces theoretical concepts but also enhances students' ability to solve complex problems and make informed decisions.



Smith et al. (2009) stress the importance of providing students with on-going support throughout their WIL experience. This includes regular check-ins with academic advisors and industry mentors, as well as opportunities for reflection and feedback. Such support mechanisms help students navigate the challenges they may encounter in the workplace, build resilience, and develop critical thinking skills. Coll and Zegwaard (2006) add that assessment methods should be designed to encourage reflective practice, enabling students to critically evaluate their experiences and identify areas for improvement.

Recommendations for Educational Institutions:

Strengthening Industry Partnerships - Establish clear communication channels and formal agreements with industry partners to define roles, expectations, and learning outcomes. Engage industry professionals in the design and delivery of WIL programs to ensure alignment with current industry needs and practices. Foster long-term relationships with a diverse range of industry partners to provide students with varied and relevant work experiences.

Enhancing Academic Integration and Support - Design WIL programs that integrate academic coursework with work placements, ensuring that students can apply theoretical knowledge in practical settings. Provide students with continuous support through regular mentorship, feedback sessions, and opportunities for reflection. Implement assessment methods that encourage reflective practice and critical evaluation of work experiences to enhance learning outcomes.

Ensuring Program Quality and Relevance - Regularly review and update WIL program curricula to keep pace with industry developments and emerging trends. Collect and analyse feedback from students, industry partners, and academic staff to identify areas for improvement and implement necessary changes. Promote a culture of collaboration and continuous improvement to ensure that WIL programs remain effective and relevant.

Challenges and Limitations of WIL Programs

Variability in Placement Quality - One of the challenges associated with WIL programs is the variability in the quality of placements. Some students may encounter poorly structured or less relevant work experiences, which can impact the overall effectiveness of the program (Billet & Choy, 2018). Addressing this issue requires robust quality assurance mechanisms and close monitoring of placement experiences.

Limited Capacity of Employers - Another limitation is the capacity of employers to provide meaningful learning experiences. Not all organizations have the resources or willingness to engage in WIL partnerships, which can limit the availability of high-quality placements (McCarthy et al., 2017). Strategies to address this include expanding the range of industries involved and developing innovative WIL models.

Comparative Analysis of WIL Programs Across Disciplines - The impact of WIL programs can vary across different academic disciplines. For instance, engineering and

healthcare programs often have well-established WIL components, while other fields may lack similar opportunities (Smith et al., 2008). Comparing the effectiveness of WIL programs across disciplines provides insights into how different industries leverage experiential learning and identifies best practices that can be adapted to other fields.

International Perspectives - International studies offer additional perspectives on WIL programs. For example, research by Lester and Costley (2010) highlights differences in WIL implementation and outcomes across countries. These studies reveal that while WIL programs share common goals, the specific practices and structures can vary significantly, reflecting different educational and labor market contexts.

4. Recommendations for Optimizing WIL Programs

Enhancing Industry Collaboration - To optimize WIL programs, it is essential to strengthen industry collaboration. Recommendations include developing more strategic partnerships with a diverse range of employers, ensuring that placements are meaningful and relevant, and fostering long-term relationships with industry stakeholders (Cameron & Browne, 2011).

Improving Program Design and Support - Improving program design involves aligning academic curricula with industry needs and providing comprehensive support for students. This includes offering pre-placement training, continuous feedback, and post-placement evaluations to enhance the overall learning experience (McCarthy et al., 2017).

Exploring New Models of WIL - Future research should explore innovative models of WIL, including virtual internships and project-based learning, to address the limitations of traditional placements. These models can offer flexible and scalable alternatives to conventional WIL formats (Lester & Costley, 2010).

Long-Term Impact Studies - Longitudinal studies examining the long-term impact of WIL on career progression and job satisfaction will provide valuable insights into the sustained benefits of these programs. Such research can inform future program design and policy decisions (Smith et al., 2016).

VI. CONCLUSION

The analysis of secondary data and literature review highlights the significant impact of Work Integrated Learning programs on graduate employability. WIL programs contribute to the development of key competencies, improve job acquisition rates, and enhance career readiness. However, challenges such as variability in placement quality and limited employer capacity need to be addressed to maximize the effectiveness of these programs. The success of WIL programs is influenced by the quality of industry partnerships and the level of academic integration and support provided to students. Strong industry connections ensure that students gain meaningful and relevant work experiences, while a well-integrated curriculum and comprehensive support mechanisms enhance their overall



learning outcomes. By focusing on these factors, educational institutions can maximize the benefits of WIL programs, better preparing students for the workforce and meeting the needs of both students and industry partners.

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DOES CBN INTERVENTIONS INFLUENCE EXCHANGE RATES DYNAMICS IN NIGERIA: AN ECONOMETRIC PERSPECTIVE

Ohakwe J¹, Amaefula C.G^{2*} and Nkoli D. S³

Department of Mathematics and Statistics, Federal University Otuoke, Bayelsa State, Nigeria

*Corresponding Author

ABSTRACT

The persistent naira instability and devaluation in the foreign exchange market has become a concern in many quarters, as the negative effect is being felt in the high cost of goods and services in Nigeria. Therefore, this study is concerned with the examination of the impact of CBN intervention on exchange rate volatility in Nigeria. The monthly time series data on naira \1 US dollar used covered the period of 1981M1 to 2022M12. statistical tools such as order of integration, volatility measure such as ARCH and GARCH, regression and maximum likelihood method of estimation were adopted. The order of integration result specifies that the percentage log difference of the exchange rate is integrated order zero. The comparative study of the better measure of volatility between ARCH and GARCH using BIC indicates that GARCH(2, 2) is most appropriate. The results also show that interventions such as Inter-bank Foreign Exchange Market issued which started on June 15, 2016 such that Naira Settled Over the Counter (OTC) and Regulation for the Transaction of Renminbi" released on June 7, 2018 and the renewal of the Bilateral Swap Currency Agreement (BSCA) with the Peoples Bank of China (PBoC) have no effect on the exchange rate and its volatility as the p-values are not significant both in the mean Equation and conditional variance equation. Therefore, the CBN should re-evaluate their intervention policies so as to reduce the vulnerability of naira in the mist of foreign currency exchange.

KEYWORDS: ARCH, exchange rates, GARCH, intervention and Volatility

1. INTRODUCTION

One of the statutory obligations of the Central bank of Nigeria is to conduct monetary policy in line with the Federal Government of Nigeria (FGN) medium-term expenditure Framework (MTEF) for the purpose of maintaining financial and price stability. The CBN also conducts exchange rate policy in Nigeria which is targeted towards preserving the value of the naira, sustain an external reserves position that is favourable to the economy and ensure both internal and external balance without compromising the the general goal of macroeconomic stability. Apart from its responsibility to ensure price stability, the CBN is responsible of boosting liquidity in the Nigerian Foreign Exchange Market via interventions from time to time,

Over the years CBN have introduced several policy measures and according to CBN(2021) monetary circular No.44 provided different policy measures such as; open market operations (OMO) for liquidity management; cash reserve and liquidity ratios(CR&LR); the net open position (NOP) that stipulates the total foreign currency borrowing of a domestic bank, excluding inter-group and inter-bank borrowing which shall not exceed 125.0 per cent of shareholders' funds unimpaired by losses, the whole essence NOP is to mitigate risk; net foreign currency trading position (NFCTP) of any authorized dealer is between 0.5 and -10.0 % of their shareholders' funds unimpaired by losses; foreign exchange interventions (FEI) is also a policy measure to enhance transparency, efficiency, and liquidity in the exchange market; foreign exchange interventions in Renminbi (FEIR) is the bilateral swap currency agreement (BSCA) the CBN entered with the Peoples Bank of China (PBoC) to maintain bi-weekly auctions for the sales of Renminbi on trade-backed transactions to authorized dealers; over-the-counter futures trade transactions (OCFTT) and discount window operations (DWO) are all policy measures for liquidity management.

In this research, we will consider only CBN interventions relative to exchange rate exchange rate particularly; foreign exchange interventions (FEI), foreign exchange interventions in Renminbi (FEIR) and net foreign currency trading position (NFCTP). The trajectories of persistent rise in inflation pressure, naira "kissing the floor" in devaluation and consistent borrowing have in no doubt, negative effects on the determinants of a developing economy. The value of a country's currency is a good measure of their economic strength, for instance, the value of US Dollar in the foreign exchange market is symbolic to the strength of the economy, so is British pounds, Canadian dollar, France franc and so on.



It was reported on the 8 August 2017 that the reasons for the steady depreciation of the naira despite different interventions by the Central Bank of Nigeria (CBN) in the foreign exchange market are the obvious devaluation of the interbank market rate and the demand for foreign exchange by pilgrims were far outstripping the supply. According to the report, the demand pressure on foreign exchange and the multiplicity rate had a negative impact on naira (The Tide 2017). Amaefula(2022) opined that the volume of trade between two countries is affected by the value of their domestic currency in exchange for a unit of foreign currency in terms of bilateral trade relationships. So, when naira is devalued, it is an edge to the foreign investors and a limitation to Nigeria's economy.

Naira exchange rate has hit its worse devaluation scenario since independence despite implementation of difference monetary policy measures and intervention. According to Tide in 2017, naira degenerated into devaluation after many weeks of appreciation as a result of belligerent interventions of the CBN at the foreign exchange market, emphasizing that naira exchanged between N360 and N365 to one dollar for approximately four months before it started depreciating, exchanging between N367 and N370 to a dollar at the parallel market (The Tide, 2017).

However, since 2017, the CBN has introduced several interventions to tame the volatility of naira exchange rate in the foreign exchange market. At end 2023, naira exchange to 1 US dollar was over N1000 at the open or black market. The question that still remains unanswered is, how far has the CBN interventions impacted on the volatility of Naira exchange rate? This is the nexus of this present research study.

The effects of intervention on exchange rate over the years have produced contradictory results. In the 80's, there is growing view that noise trading affects dollar exchange rate, for instance, Frankel and Foot(1985) used a model that considered three classes of players(fundamentalists, chartists and portfolio managers), their result showed that dollar appreciation in the mid 84 can be explained by the endogenous takeoff of a speculative bubbles. There is the view that intervention can be used to reduce volatility of exchange rate. Some others are of the opinion that intervention will course unfavorable effect of generating uncertainty and then volatility. Bailliar and Humpage (1992) found that the sum of Japan and US intervention increased the uncertainty of Yen-Dollar exchange rate in post-Louvre Accord period. Dominguez(1993) discovered that actual US intervention caused a decline in the conditional daily and weekly exchange rate volatility while secrete intervention increased conditional volatility.

Bonser –Neal and Tannah(1994) in their study found that US intervention in general either increases Ex-ante exchange rate volatility or had no effect.

The importance of predicting exchange rates comes from the reality that the results of a given financial decision made today are dependent on the prevailing exchange rate in the upcoming period, hence, forecasting exchange rate is significant for various international financial transactions, namely speculation, hedging, as well as capital budgeting (Moosa, 2008).

The stability of the exchange rate is presently the bedrock of all economic activities Taiwo and Adesola, 2013). Therefore, central banks should pay special attention to exchange rates and the value of their domestic currency (Dilmaghani and Tehranchian, 2015).

Foreign exchange (FX) interventions are primarily used by central banks to manage financial issues that has to do with volatility of exchange rate and abrupt changes in capital inflows for the purpose financial stability(BIS, 2019). More also, Foreign exchange(FX) interventions in emerging economies are often adopted as a practice consistent with international reserve accumulation programs that aim to build reserves for precautionary reasons (Arslan and Cantú, 2019).

Several research studies have been conducted on the related subject matter across the globe. Menkhoff(2010) and Adler and Tovar (2011) highlight that FX interventions can effectively curb the exchange rate and its volatility in emerging market economies, but less so in advanced economies. Seyfi and Recep (2011) examined the effect of exchange rate volatility on Turkish stock returns using monthly data for the period 1987-2010. The squared residuals from the Autoregressive Moving Average (ARMA) models are used to generate a measure of exchange rate volatility and then tested against Turkish stock returns. The results of this study emphasized that Turkish exporters did not consider exchange rate uncertainty as a crucial problem.

Amaefula(2011) studied the effect of exchange rate dynamics on stock returns and volatility during the global financial crises in Nigeria using monthly official exchange rate of naira vis-à-vis one US dollar and All Shares Index prices of the NSE market. The method of classical multivariate generalized conditional heteroscedasticity (CM-GARCH(1, 1)) model was used in the analysis. The results showed that exchange rate affects both stock market returns and stock returns volatility negatively while exchange rate volatility exerts no effect on stock returns, it was noted that exchange rate volatility exacted significant positive effect on the volatility of stock returns during the global financial crises.



Appiah and Adetunde (2011) in their study focused on the prediction of the Ghana cedi's and the US dollar exchange rate using data period of January 1994 to December 2010 and their findings revealed that ARIMA (1, 1, 1) is found most appropriate, forecast values were consistent with the depreciating trend of the Ghana Cedi's against the US dollar.

As for some country-specific studies, like Mexico for instance, García-Verdúand Zerecero (2013) discovered that mixed results and emphasize that reducing exchange rate volatility may depend on the design of the intervention. Durán-Vanegas et al. (2016) shows that FX interventions effectively reduce the exchange rate volatility in Peru. Echavarría et al. (2018), analyzing the case of Colombia, emphasize that FX interventions are more effective when they are previously announced. Kuersteiner et al. (2018), on the other hand, looking at the same country's experience, find that the FX interventions' effects on the exchange rate are short live and tend to last between 2 to 3 weeks.

In the case of Brazil, Viola et al. (2019) also obtain mixed results when studying daily or accumulated interventions increasing and reducing volatility at different quantiles. In contrast, Janot and Macedo (2016) found that unanticipated interventions in Brazil affect the exchange rate level but finds no evidence on its effect on the volatility. Finally, Disyatat and Galati (2007) find no evidence of a short-term impact on volatility in the case of FX interventions conducted by the Czech National Bank. This lack of a unified conclusion regarding the effectiveness of FX interventions reflects, among other issues, the wide variety of success criteria used in these empirical studies.

Fatum and M. Hutchison (2003), Fratzscher (2008), Durán-Vanegas et al. (2016) and Fratzscher et al. (2019), for example, look at the direction and smoothness of the exchange rate level after an intervention. On the other hand, several studies focus on how the interventions affect the volatility of the exchange rate (Echavarría et al., 2018; Gamboa- Estrada, 2019; Viola et al., 2019).

Viola et al. (2019) implement a quantile regressions approach to account for potential asymmetric effects on volatility. In contrast, Gamboa-Estrada (2019) estimates an extension of the GARCH model to study regime changes in volatility and the effectiveness of Latin American interventions, an approach similar to the one proposed in this article.

Fratzscher et al. (2019), in their study found that FX interventions are effective, especially when announced and accompanied by a verbal intervention. Filardo et al. (2022), based on a cross-country study of advanced and emerging economies, find that the effectiveness of FX interventions depends on the degree of economic misalignment, how illiquid is the FX market, and how long the FX interventions last. Also, these authors emphasize that FX sales are more effective than FX purchases.

The effectiveness of Foreign exchange (FX) interventions in Chile since the adoption of a fully flexible exchange rate regime in the late 1990s was investigated with a high-frequency GARCH(1,1) volatility model with Markov-Switching regimes and evaluate the effectiveness of FX interventions within a local projection setting. They found that FX interventions in Chile tend to occur during high exchange rate volatility periods, which correlate with domestic and foreign financial factors. Moreover, we show that the FX intervention that started by the end of 2019—the latest intervention included in our study—effectively reduced the exchange rate volatility and the probability of being at a high volatility state (Alejandro and Marco 2023).

2. MATERIALS AND METHODS

The materials and methods used in the study are specified in the sub-sections below;

2.1 Source of data and variable definition

The monthly data on Nigeria naira vis-avis one US dollar exchange rate is obtained from the CBN(2023) statistical bulletin and it covers the period of 1983 to 2022. The US dollar is chosen because of it's global accepted currency and predominant in the foreign exchange rate market. Interventions are policies or decisions taken by the Central banks to stabilize the domestic currency against pressure of devaluation. Interventions are used as dummy variables with zero value before intervention and one during and after intervention.

Exchange rate Naira-US dollar exchange rate is given as $Y_t = (\text{Log}ER_t - \text{Log}ER_{t-1}) \times 100$. Interventions shall be denoted as $I_{i,t}$.

2.2 ARCH(q) and Generalized ARCH(p,q) models

Volatility is a measured of variability around the mean and average return of a security. In this study, we will consider only two measures of volatility such as the ARCH and the GARCH and select the better model the describes the volatility of exchange rate dynamics using Akaike information criterion(AIC).



2.2.1 Autoregressive conditional heteroscedasticity (ARCH) model

The ARCH model frame work does not only allow for the estimate of the conditional variance of a time series observation but also, helps to forecasts the future values of the conditional variance to be computed. The ARCH model developed by Engle (1982) is a model that allows the conditional variance to be time-varying, while the unconditional variance is constant. The ARCH (q) model is of the form

$$\sigma_t^2 = \varphi + \sum_{i=1}^q \alpha_i \varepsilon_{t-i}^2 \quad (1)$$

In (1), the nonnegativeness and stationarity of σ_t^2 are guaranteed for $\varphi > 0$, $\alpha_i \geq 0$ for $i = 1, 2, \dots, q$, and $\sum_{i=1}^q \alpha_i < 1$. The case where $q = 1$, σ_t^2 becomes a function of the previous squared shock and large shocks of either sign tend to be preceded by large shocks and vice versa. The stylized facts of volatility clustering and excess kurtosis can be captured by ARCH (1), its short coming is that, it is unlikely that the model accommodates for the features related to the autocorrelation function of squared disturbances ε_t^2 . An ARCH (q) process in many cases is not able of capturing both the height and shape dimension of the autocorrelation function, therefore, further generalization is required (Pagan, 1996).

If $\varepsilon_t = \sigma_t z_t$ then, generalized ARCH (p, q) model becomes

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^p \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^q \beta_j \sigma_{t-j}^2 \quad (2)$$

where z_t is a sequence of independent and identically distributed (iid) random variable with mean zero(0) and variance 1, $\alpha_0 > 0$, $\alpha_i \geq 0$, $\beta_j \geq 0$ and $\sum_{i=1}^p \alpha_i + \sum_{j=1}^q \beta_j < 1$. Note that $\alpha_i = 0$ for $i > p$ and $\beta_j = 0$ for $j > q$. The constraint on $\alpha_i + \beta_j$ implies that the unconditional variance of ε_t is finite whereas the conditional variance σ_t^2 evolves over time. The z_t is often assumed to follow a standardized normal or standardized t-distribution or generalized error distribution. Equation (3) reduces to ARCH (p) model if $q = 0$. The α_i and β_j are referred to as ARCH and GARCH parameters, respectively.

2.3 The ARCH(q) and GARCH(p, q) models become;

$$y_t = \varphi_0 + \varphi_1 Int_{i,t} + \varphi_2 Int_{2,t} + e_t$$

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^p \alpha_i e_{t-i}^2 + \sum_{i=1}^2 \phi_i Int_{i,t} \quad (3)$$

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^p \alpha_i e_{t-i}^2 + \sum_{j=1}^q \beta_j \sigma_{t-j}^2 + \sum_{i=1}^2 \phi_i Int_{i,t}$$

Where ϕ_i is the coefficient of the intervention dummy variable. $\alpha_0 > 0$, $\alpha_i \geq 0$, $\beta_j \geq 0$ and $\sum_{i=1}^p \alpha_i + \sum_{j=1}^q \beta_j < 1$

2.4 Estimation techniques

In the case of univariate GARCH, for a normally distributed random error the log likelihood function for y_t assuming a sample of T is

$$l_t = -\frac{T}{2} \ln(2\pi) - \frac{T}{2} \sum_{t=1}^T \ln(\sigma_t^2) - \frac{T}{2} \sum_{t=1}^T (y_t - X_t'(\theta)) / \sigma_t^2 \quad (4)$$

2.5 Order of integration test

Order of integration test is critical in understanding the number of unit root present in a data variable. We will adopt the auxiliary autoregressive order three order of integration test (AAR(3) OIT) attributed to Amaefula(2021), since at glance, the model estimation can reveal the number of unit root(s) present and the test is of the form,



$$z_t = \varphi_0 + \delta tre + \sum_{i=1}^3 \varphi_i z_{t-i} + u_t \tag{5}$$

Where, φ_0 = intercept, δ = trend coefficient, u_t = disturbance term and $\varphi_i (i = 1,2,3)$ are the coefficients of lagged dependent variable. The constrints for φ 's are summarized in the Table1 below;

Table1. AAR(3) OIT Condition and Hypothesis

Integration order I(d)	Constraints	Hypothesis
I(0)	All the values of φ_i 's must be strictly less than one; $ \varphi_1 < 1, \varphi_2 < 1$ and $ \varphi_3 < 1$	$H_{01} : \varphi_i < 1$ $H_{a1} : \text{atleast one of } \varphi_i\text{'s is not less than } 1$
I(1)	$ \varphi_1 \geq 1, \varphi_2 < 1, \varphi_3 < 1$ and $\frac{ \varphi_2 }{ \varphi_3 } > 1$	$H_{01} : \varphi_1 < 1$ $H_{01} : \varphi_1 \geq 1$
I(2)	$ \varphi_1 > 1, \varphi_2 \geq 1, \varphi_3 < 1$ and $\frac{ \varphi_2 }{ \varphi_3 }, \frac{ \varphi_2 }{ \varphi_1 } > 1$	$H_{01} : \varphi_2 < 1$ $H_{01} : \varphi_2 \geq 1$

3. DATA ANALYSIS AND RESULTS

This section presents the time series plot of the naira\1 US dollar exchange rate, the percentage changes in the naira\1 US dollar exchange rate, result of order of integration, comparison of volatility measure and the estimates of the specified model.

3.1 Time plot

The time series plot of naira\1 US dollar exchange rate and percentage changes in naira\1 US dollar exchange rate is as presented in Figure1 and Figure2 below.

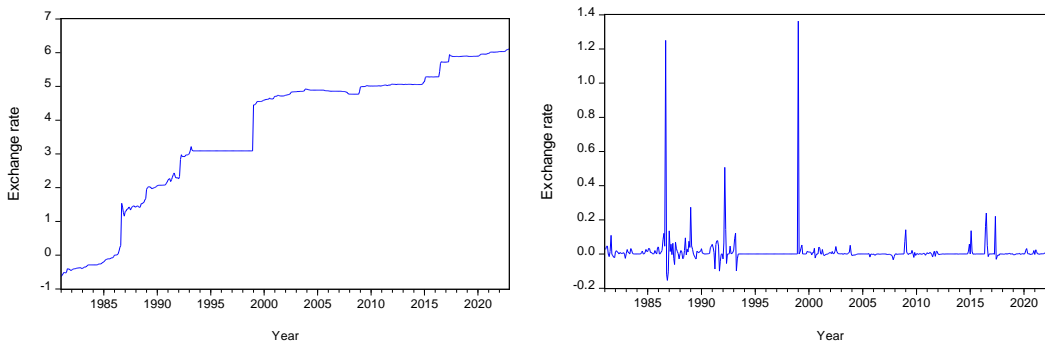


Figure1. Time plot of Naira\1 US dollar exchange rate and its percentage changes

Figure1 exhibits an appreciation of US dollar against naira as the foreign exchange (FX) rate shows a consistent rise with higher variability in 1987, 1992 and 1999. Figure1 also indicates that there are high positive changes around these variability periods.

3.2 Order of integration

Adopting Amaefula (2021) order of integration, we have

$$y_t = 0.0138 + 0.0197 y_{t-1} - 0.0291 y_{t-2} - 0.0286 y_{t-3} \tag{6}$$

prob. (0.0012) 0.6614) (0.5162) (0.5855)

The order of integration test analysis in Equation (6) reveals that y_t is integrated order zero (I(0)), that is, stationary as the absolute values of φ 's are all strictly less than one.



3.3 Linear Regression Model

$$y_t = 0.0143 + 0.0050Int_{1,t} - 0.0153Int_{2,t} + e_t$$

We will estimate a simple linear regression model *prob.* (0.0013) (0.6069) (0.4997)

$$R^2 = 0.0014 , \quad \text{Durbin - Watson stat} = 1.9621$$

(7)

Equation (7) result shows that intervention of Nigerian Inter-bank Foreign Exchange Market issued which started on June 15, 2016 such that Naira Settled Over the Counter (OTC) and Regulation for the Transaction of Renminbi” released on June 7, 2018 and the renewal of the Bilateral Swap Currency Agreement (BSCA) with the Peoples Bank of China (PBoC) are not impactful on exchange rate changes is not impactful on exchange rate changes. There is no evidence of serial correlation based on Durbin-Watson statistic.

Table2. Descriptive Summary

Mean	120.1375
Median	113.8300
Maximum	450.7075
Minimum	0.532300
Std. Dev.	126.1629
Skewness	1.083002
Kurtosis	3.167695
Jarque-Bera Probability	99.11355 0.000000
Sum	60549.31
Sum Sq. Dev.	8006288.
Observations	504

The descriptive summary in Table2 indicates that the data is heavy tail as the skewness is skewed to the right. The kurtosis is a little bit higher than the normal. The Jargue-Bera test indicates that the exchange rate is not normally distributed. Therefore, we reject the null hypothesis of normal distribution at the 1% level.

3.4 Volatility Estimate

We will select the best measure of volatility by comparing ARCH(1), ARCH(2), GARCH(1, 1), GARCH(2, 1), GARCH(1, 2), and GARCH(2, 2) using Bayesian information criterion as shown in Table 3 below.

Table3. Comparing ARCH and GARCH models

Model	AIC	BIC	Remark
ARCH(1)	-6.8453	-6.8117	No ARCH effect
ARCH(2)	-6.1458	-6.1039	No ARCH effect
GARCH(1, 1)	-6.8923	-6.8504	No ARCH effect
GARCH(2, 1)	-7.1246	-7.0743	No ARCH effect
GARCH(1, 2)	-7.3502	-7.2999	No ARCH effect
GARCH(2, 2)	-7.3694*	-7.3107*	No ARCH effect

The result in Table3 indicates that GARCH(2, 2) is most appropriate and can capture the volatility nature of exchange rate. The generalized ARCH(2, 2) estimates with each intervention is given in Table4-Table7 below.

**Table4. Volatility of exchange rate and interventions**

Dependent Variable: Y
 Method: ML ARCH - Student's t distribution (BFGS / Marquardt steps)
 Date: 02/02/24 Time: 03:04
 Sample (adjusted): 1981M02 2022M12
 Included observations: 503 after adjustments
 Failure to improve likelihood (non-zero gradients) after 152 iterations
 Coefficient covariance computed using outer product of gradients
 Presample variance: backcast (parameter = 0.7)
 $GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*RESID(-2)^2 + C(7)*GARCH(-1) + C(8)*GARCH(-2) + C(9)*Int1 + C(10)*Int2$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.90E-07	1.25E-05	0.015211	0.9879
Int1	0.000277	0.001293	0.214228	0.8304
Int2	0.000483	0.001480	0.326543	0.7440
Variance Equation				
C	2.27E-06	2.63E-06	0.863824	0.3877
RESID(-1)^2	192.2486	260.6780	0.737495	0.4608
RESID(-2)^2	-6.597805	21.60174	-0.305429	0.7600
GARCH(-1)	0.340161	0.037733	9.015028	0.0000
GARCH(-2)	-0.033646	0.006214	-5.415007	0.0000
Int2	0.003625	0.006357	0.570334	0.5685
Int3	0.003662	0.005597	0.654237	0.5130
T-DIST. DOF	2.001710	0.002266	883.4230	0.0000
R-squared	-0.021644	Mean dependent var		0.013402
Adjusted R-squared	-0.025731	S.D. dependent var		0.090910
S.E. of regression	0.092072	Akaike info criterion		-7.748464
Sum squared resid	4.238669	Schwarz criterion		-7.656165
Log likelihood	1959.739	Hannan-Quinn criter.		-7.712255
Durbin-Watson stat	1.917899			

The result in Table4 shows that intervention1(int1) and intervention2(int2); Nigerian Inter-bank Foreign Exchange Market issued which started on June 15, 2016 such that Naira Settled Over the Counter (OTC) and Regulation for the Transaction of Renminbi” released on June 7, 2018 and the renewal of the Bilateral Swap Currency Agreement (BSCA) with the Peoples Bank of China (PBoC) have no effect on the exchange rate and its volatility as the p-values are not significant both in the mean Equation and conditional variance equation.

Table5. Heteroskedasticity Test: ARCH

F-statistic	0.002116	Prob. F(1,500)	0.9633
Obs*R-squared	0.002125	Prob. Chi-Square(1)	0.9632

The ARCH test in Table5 above indicates absence of the ARCH effect on the residuals of the estimated model.

**Table6. Volatility of exchange rate and Pool effect of interventions**

Dependent Variable: Y
 Method: ML ARCH - Student's t distribution (BFGS / Marquardt steps)
 Date: 02/02/24 Time: 03:37
 Sample (adjusted): 1981M02 2022M12
 Included observations: 503 after adjustments
 Failure to improve likelihood (non-zero gradients) after 105 iterations
 Coefficient covariance computed using outer product of gradients
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*RESID(-2)^2 + C(6)*GARCH(-1)
 + C(7)*GARCH(-2) + C(8)*X

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-3.11E-08	1.61E-07	-0.193308	0.8467
X	0.000635	0.000642	0.989392	0.3225

Variance Equation				
C	5.13E-13	1.40E-12	0.366771	0.7138
RESID(-1)^2	6.293523	23.54961	0.267245	0.7893
RESID(-2)^2	0.458901	4.389077	0.104555	0.9167
GARCH(-1)	0.281902	0.642216	0.438952	0.6607
GARCH(-2)	0.108390	0.318328	0.340499	0.7335
X	0.000656	0.002577	0.254749	0.7989

T-DIST. DOF	2.022977	0.088596	22.83371	0.0000
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R-squared	-0.021529	Mean dependent var	0.013402
Adjusted R-squared	-0.023568	S.D. dependent var	0.090910
S.E. of regression	0.091975	Akaike info criterion	-8.179563
Sum squared resid	4.238193	Schwarz criterion	-8.104045
Log likelihood	2066.160	Hannan-Quinn criter.	-8.149938
Durbin-Watson stat	1.918102		

The result in Table6 indicates that in the mean equation, the pool effects of the intervention(X) has no effect on exchange rate and in the conditional variance equation, the pool effects of the intervention(X) has also not impacted on the volatility of exchange rate.

Table7. Heteroskedasticity Test: ARCH

F-statistic	0.001992	Prob. F(1,500)	0.9644
Obs*R-squared	0.002000	Prob. Chi-Square(1)	0.9643

The ARCH test in Table7 indicates that there is no more ARCH effect in the residuals of the estimated model.

3.5 Discussion of Findings

The impact of CBN interventions on the volatility of exchange rate is the focal point of this study. The order of integration test showed that the percentage logarithm difference of exchange rate is integrated order zero. Findings show that CBN interventions are neither impactful to exchange rate nor exchange rate volatility in Nigeria. This outcome is in-line with that of Disyatat and Galati (2007) who found no evidence of a short-term impact on volatility in the case of FX interventions conducted by the Czech National Bank and Macedo (2016) in terms of on volatility for Brazil.. But contrary to our findings are that of Fratzscher et al. (2019) and Janot and Macedo (2016) in terms of on exchange rate for Brazil.



4. CONCLUSION

The findings indicate that the CBN interventions have no significant effect on exchange rate and exchange rate volatility. Therefore the government through the CBN should re-assess their intervention policies to see how they can reduce the vulnerability of naira in the mist of foreign currency exchange.

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COMPARATIVE DESCRIPTION OF THE DANIS-WEBER, AO, LAUGE HANSEN AND DIAS-TACHDJIAN CLASSIFICATION SYSTEMS FOR ANKLE FRACTURES

Bryam Esteban Coello García¹, Byron Fabián Pinos Reyes²,
Genesis Brigeth Jaramillo Curipoma³, Fernanda Gisella Diaz Araujo⁴,
Andrea Verónica Reinoso Piedra⁵, Maria Jose Montero Cardenas⁶,
José Miguel Guerrero Granda⁷, Diego Javier Sánchez Pulgarín⁸,
Carmen Ruth Sanmartín Riera⁹, Karina Alexandra Bermeo Bermeo¹⁰

¹Postgraduate Doctor In Orthopedics and Traumatology at Faculdade de Ciências Médicas Minas Gerais. Belo Horizonte - Brasil. ORCID <https://orcid.org/0000-0003-2497-0274>

²General Practitioner at "Ministerio de Salud Pública", Faculty of Medical Sciences, Universidad Católica de Cuenca. Ecuador ORCID <https://orcid.org/0009-0004-8217-5126>

³General Practitioner in Independent Practice, Faculty of Medical Sciences, Universidad de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0006-5259-9029>

⁴General Practitioner at "Centro de Salud Ludo Sigsig Distrito 01D08", faculty of Medical Sciences, Universidad Católica de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0004-2505-4520>

⁵General Practitioner at "Ministerio de Salud Pública", faculty of Medical Sciences, Universidad Católica de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0006-0157-5983>

⁶General Practitioner at "Hospital General de Macas", faculty of Medical Sciences, Universidad Católica de Cuenca. Ecuador ORCID <https://orcid.org/0009-0007-7592-1161>

⁷General Practitioner in Independent Practice, Faculty of Medical Sciences, Universidad Católica de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0000-6159-5640>

⁸General Practitioner in Independent Practice, Faculty of Medical Sciences, Universidad Católica de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0005-3610-5570>

⁹General Practitioner at "Clínica De Especialidades Médicas Auxilio Praxxel", Faculty of Medical Sciences, Universidad Católica de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0005-0924-2959>

¹⁰General Practitioner in Independent Practice, Faculty of Medical Sciences, Universidad Católica de Cuenca. Azuay- Ecuador ORCID <https://orcid.org/0009-0000-5204-2737>

Corresponding Author : Bryam Esteban Coello García Address: Rua Teresópolis 183. Belo Horizonte. Minas Gerais. Brasil
.Postal Code: 31130050

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SUMMARY

Introduction: Ankle fractures are very common in emergency departments around the world. Through time and scientific advances, several means of classification have been structured with regard to ankle fractures. The most frequent, recognized and used classification systems in ankle fractures at the moment are those of Lauge-Hansen, the AO/OTA system, Danis-Weber in adults and Dias-Tachjian in pediatrics.

Objective: to detail the current information related to the Danis-Weber, AO, Lauge-Hansen and Dias-Tachdjian classification systems for ankle fractures.

Methodology: a total of 37 articles were analyzed in this review, including review and original articles, as well as clinical cases, of which 24 bibliographies were used because the other articles were not relevant to this study. The sources of information were PubMed, Google Scholar and Cochrane; the terms used to search for information in Spanish, Portuguese and English were: ankle fracture classification, AO classification, Danis-Weber classification, Lauge Hansen classification and Dias-Tachdjian classification.

Results: In day-to-day clinical practice, the fracture itself is usually descriptively classified as a uni-, bi- or trimalleolar fracture. In the Lauge and Hanssen system, supination-adduction ranges from 10 to 20%, supination-external rotation ranges from 40% to 75%, pronation-abduction ranges from 5% to 20% and pronation-external rotation accounts for 5% to 20% of malleolar fractures.



The Dias-Tachdjian system shows that supination injuries are more frequent than pronation injuries, accounting for up to 82% of all ankle fractures, with supination-inversion being the most common, accounting for about 61% of all pediatric ankle fractures. With regard to the AO/OTA classification, the most common infrasyndromal fractures are A1 (isolated): 68.9%, followed by A2 (bimalleolar): 24.8% and finally A3 (trimalleolar): 6.3%. Trans-ankle fractures account for 85% of ankle fractures. Suprasyndesmal fractures are type C of the Weber classification and following the AO/OTA classification, type 44C1 would be the most common (5.3%).

Conclusions: the importance of fracture classification systems is crucial in the choice of treatment, both conservative and surgical, as well as in the future prognosis of the affected individual. The most frequent, recognized and used classification systems in ankle fractures at the moment are those of Lauge-Hansen, the AO/OTA system, Danis-Weber in adults and Dias-Tachjian in pediatrics. In addition to the classification systems cited in this article, there are others, which may have relevance depending on the individual situation. It is important to emphasize that most of the classifications are based on a complementary study, such as radiographs or others, so knowing how to order the appropriate study and incidences helps in the future treatment of the patient with the aim of a speedy recovery.

KEY WORDS: classification, fractures, ankle, systems, trauma.

INTRODUCTION

Through time and scientific advances, various means of classification have been structured with regard to ankle fractures, many of these focused on the mechanism of injury, as well as its correlation with the type of fracture. The most frequent, recognized and used classification systems in ankle fractures at the moment are those of Lauge-Hansen, the AO/OTA system, Danis-Weber in adults and Dias-Tachjian in pediatrics(1,2).

Ankle fractures are very common in emergency departments around the world, with an incidence of approximately 187/100,000 inhabitants per year. Ankle fractures are the most common fractures of the lower limb, occurring mostly in young individuals and account for almost 9% of all fractures. Especially the type B fracture according to the Danis-Weber classification, which can lead to osteoarthritis in about 14%. Regarding the type of fracture, bimalleolar fractures are associated with 1.6-5 times more probabilities of developing any complication compared to unimalleolar fractures(3-6).

The surgical treatment of ankle fractures has as its mission the anatomical restoration of the tibio-peroneo-ankle congruence, providing stability and restoring the function of the injured limb. To achieve this objective, the type of fracture should be analyzed and classified in order to treat it in the most appropriate way(7).

METHODOLOGY

A total of 37 articles were analyzed in this review, including review and original articles, as well as cases and clinical trials, of which 24 bibliographies were used because the information collected was not important enough to be included in this study. The sources of information were Cochrane, PubMed and Google Scholar; the terms used to search for information in Spanish, Portuguese and English were: ankle fracture classification, AO classification, Danis-Weber classification, Lauge Hansen classification and Dias-Tachdjian classification.

The choice of bibliography exposes elements related to current information related to the Danis-Weber, AO, Lauge Hansen and Dias-Tachdjian classification systems for ankle fractures.

DEVELOPMENT

A perfect classification for fractures should provide information regarding the stability of the fracture, the trauma mechanism producing the fracture, as well as being reproducible and providing a pathway for the choice of the best treatment(8).

Soft tissue injuries in the ankle area accompanying closed fractures are usually divided according to Tschern and Oestern, while those accompanying open fractures are divided according to Gustilo-Anderson. Commonly, in day-to-day hospital practice, the fracture is descriptively classified as a uni-, bi- or trimalleolar fracture(9-11).

There are other classification systems commonly used because of their fundamental role in ankle fractures, some of the most frequently used are described below.

Lauge-Hansen Classification

It encompasses 4 types of injuries, based on a sequence of "pure" injuries, each of which is divided into stages of increasing severity. Based on cadaver studies. Management of ankle fractures requires an understanding of the extent of the bony and soft tissue injury. Although the Lauge-Hansen classification attempts to do this by connecting specific fracture patterns to the mechanism of injury, the experimental underpinnings of this categorization have not been meticulously reexamined using modern experimental methods(12).

The Lauge-Hansen classification takes into account:

- A) the position of the foot at the time of injury.
- B) the direction of the deforming force.

Supination-external rotation makes up about 40% to 75% of malleolar fractures.

Stage I: rupture of the anterior syndesmosis (anterior tibioperoneal ligament) with or without an avulsion fracture of its tibial or peroneal insertions.

Stage II: the typical spiroid fracture of the distal part of the fibula, extending from the anteroinferior zone towards the posterosuperior zone.

Stage III: rupture of the posterior syndesmosis (posterior tibioperoneal ligament) or a fracture of the posterior malleolus.

Stage IV: transverse fracture by avulsion of the medial malleolus or a rupture of the deltoid ligament.

Supination-adduction forming about 10 to 20% of ankle fractures. It is the only type involved in medial displacement of the talus.

Stage I: transverse avulsion fracture of the fibula, distal to the joint, or a rupture of the lateral collateral ligaments.

Stage II: vertical fracture of the tibial malleolus.

Pronation-abduction forming about 5% to 20% of malleolar fractures.

Stage I: transverse fracture of the medial malleolus or a rupture of the deltoid ligament.

Stage II: rupture of the syndesmosis or a fracture by avulsion of its insertions.

Stage III: transverse or short oblique fracture of the distal end of the fibula at or above the syndesmosis; causing a lateral comminution or a butterfly wing fragment.

External pronation-rotation forming about 5% to 20% of malleolar fractures.

Stage I: transverse fracture of the medial malleolus or a rupture of the deltoid ligament.

Stage II: rupture of the anterior syndesmosis (anterior tibioperoneal ligament) with or without fracture by avulsion of its insertions.

Stage III: spiroid fracture of the distal fibula at or above the syndesmosis extending from anterosuperior to posteroinferior.

Stage IV: rupture of the posterior tibioperoneal ligament (posterior syndesmosis) or an avulsion fracture of the posterolateral portion of the tibia(1,3,13,14).

Figure 1. Ankle radiography of different types of pre- and post-surgical fractures, in which the different classification systems can be used.



Source: The Authors.

Danis-Weber Classification

It is based primarily on radiographic criteria at the level of the fibula fracture. It classifies fractures according to the level of the fibula injury with respect to the syndesmosis, dividing them into 3 types: infrasyndesmal (Weber A), transyndesmal (Weber B) and suprasyndesmal (Weber C). However, this division does not assess stability because it does not take into account the medial component. Unlike the AO/OTA classification which details different groups within each type. At the moment this categorization has become the most widely used due to its simplicity and interobserver reliability. The more proximal, the greater the risk of syndesmosis rupture and instability(15,16).

It is divided into three types:

A: Fracture of the fibula below the level of the horizontal articular surface of the tibia. Equivalent to Lauge-Hansen supination-adduction. They are subdivided into A1 (isolated fractures of the lateral malleolus), A2 (associated fractures of the medial malleolus) and A3 (trimalleolar fractures).

B: Oblique or spiroid fracture of the fibula, produced by external rotation at or near the syndesmosis. Equivalent to Lauge-Hansen supination-eversion injury. They are subdivided into B1 (isolated fractures of the lateral malleolus), B2 (associated medial injury) and B3 (associated medial and posterolateral injury).

C: Fracture of the fibula above the level of the syndesmosis generating a rupture of the syndesmosis almost always associated with a medial lesion. It includes Maissonneuve and corresponds to stage III of the Lauge-Hansen pronation-eversion or pronation-abduction fractures. They are subdivided into C1 (single fibula fracture), C2 (multifragmentary fracture) and C3 (proximal fibula fractures). All of these are related to medial injuries (bony or ligamentous) and/or injuries of the posterior malleolus(3,16,17).

The Dias-Tachdjian Classification

Described in 1978 by pediatric orthopedic surgeons, it is a classification system similar to Lauge-Hansen in adults, as it attempts to describe ankle fractures with respect to the mechanism of injury using the position of the ankle and the direction of the applied force. However, the Dias-Tachdjian classification takes into account the fracture pattern with respect to the open distal tibial and fibular physis. The classification is suitable for application to young children (< 12 years) with completely open physes. This system presents four mechanisms of injury among which we have supination-inversion (SI), pronation-eversion-external rotation (PEER), supination-plantar flexion (SPF) and supination-external rotation (SER). It can be said that the level of physis closure accompanied by the mechanism of injury can show a lot of information about the fracture pattern, extension and growth plate involvement(18).

Supination-Inversion

Supination injuries are more common than pronation injuries, accounting for up to 82% of all ankle fractures. The most common of these injuries is supination-inversion (SI) with about 61% of all pediatric ankle fractures.

Stage 1: SH type I fracture of the distal physis of the fibula, analogous to stage 1 of the Lauge-Hansen supination-adduction injury. It makes up 39% of all pediatric ankle fractures and is managed with a short leg cast for 3-4 weeks.

Stage 2: SH type I injury of the distal fibula, however, progresses to include a SH type III or IV fracture of the medial distal tibia, analogous to stage 2 supination-adduction in adults. Infrequently SH type I or II of the distal tibia with medial displacement of the entire medial displacement of the entire tibial epiphysis. It makes up 22% of all pediatric ankle fractures and these fractures are managed more aggressively. Specifically the type III/IV SH fracture of the medial distal tibia may require open reduction and internal fixation with transepiphyseal screws of the medial malleolus if there is more than 2 mm of displacement.

Pronation-Eversion, External Rotation

The most common in children is pronation-eversion, external rotation (PEER), making up 18% of all pediatric ankle fractures. PEER results in a SH type II fracture of the lateral distal tibia and a diaphyseal fracture of the distal fibula, bearing a resemblance to stage III external pronation-rotation of the Lauge-Hansen classification. This injury is usually managed with closed reduction, however, it may require a lateral incision to disengage the lateral metaphyseal fragment of the tibia, which may remain between the tibia and fibula. This type of fracture is associated with a higher rate of angular deformity and premature closure of the physis.

Supination-External Rotation (SER).

They are less common than the aforementioned injuries, accounting for less than 10% of all pediatric ankle fractures. Although the direction and force are similar to those of adult SER injuries, the pediatric fracture pattern more closely resembles that of adult Lauge-Hansen pronation-adduction (PA).

Stage 1: SH type II spiral fracture of the posterior distal tibia, resembling the posterior malleolar fracture of the adult PA stage 1 injury.

Stage 2: spiral fracture of the distal diaphysis of the fibula, in addition to the spiral fracture of the distal tibia found in stage 1 SER injury. SER injuries are managed with closed reduction with or without transmetaphyseal tibial screw fixation.

Plantar Flexion-Supination

The least common, making up less than 10% of all pediatric ankle fractures. The SPF generates a SH type II fracture of the posterior distal tibia and can be distinguished from the SER injury because it does not have the lateral-medial orientation of the spiral fracture found in SER injuries. Management is usually with closed reduction and casting for 4-6 weeks, however, external fixation of the fracture fragment may be required if it is significantly displaced by the Achilles tendon. Fixation of the distal tibia with transmetaphyseal screws may be done if there is significant displacement of the fracture fragments. A unique complication of this injury is disruption of the periosteum of the fracture fragment, which may become trapped on the anterior aspect of the fracture, necessitating an

anteromedial incision and excision of the fragment prior to reduction(18-20).

Figure 2. Right Ankle Radiograph in profile, AP and oblique pre- and post-surgery.



Source: The Authors.

The AO/OTA System

Müller, Nazarian and Kock in 1987 published a general classification of fractures of alphanumeric type. Actually, it can be considered a modification of the Danis-Weber classification in which types A, B C are subdivided on the basis of the presence of medial or posterior injury:

A) Type A.

The mechanism of injury is by forced inversion of the ankle, which conditions a transverse fracture of the fibula by avulsion located at or below the level of the ankle joint or rupture of the lateral ligamentous complex. It is subdivided into:

A 1. Isolated infrasynsdesmal injury.

1. Rupture of the lateral collateral ligament.
2. Avulsion of the tip of the lateral malleolus.
3. Transverse fracture of the lateral malleolus.

A2. Infrasynsdesmal injury with fracture of the tibial malleolus.

1. Rupture of the lateral collateral ligament.
2. Avulsion of the tip of the lateral malleolus.
3. Transverse fracture of the lateral malleolus.

A3. Infrasin-malleolar injury with posteromedial fracture.

1. Rupture of the lateral collateral ligament.
2. Avulsion of the tip of the lateral malleolus.
3. Transverse fracture of the lateral malleolus.

B) Type B.

The mechanism of injury is by external rotation and eversion; when accompanied by posterior canthus, equinus position is added. It is subdivided into:

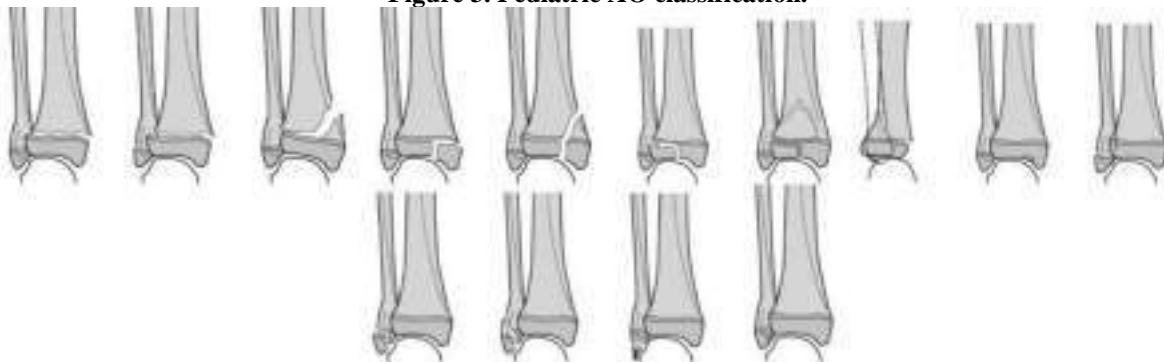
- B1. Transindesmal fracture of the anterior fibula.
1. Simple.
 2. Simple, with rupture of the anterior syndesmosis.
 3. Multifragmented.
- B2. Transindesmal fracture of the fibula with medial lesion.
1. Simple, with rupture of the medial collateral ligament (deltoid) and anterior syndesmosis.
 2. Simple, with fracture of the medial malleolus and rupture of the anterior syndesmosis.
 3. Multifragmented.
- B3. Transindesmal fracture of the fibula, with medial injury and Volkmann's fracture (fracture of the posterolateral rim).
1. Simple fracture of the fibula, with rupture of the collateral and medial ligament.
 2. Simple fibula, with fracture of the medial malleolus.
 3. Multifragmented fibula with fracture of the medial malleolus.
- C) Type C.
- There is a diaphyseal fracture of the fibula between the syndesmosis and the head of the fibula. It is subdivided into:
- C1. Suprasyndesmal injury, with simple fracture of the diaphysis of the fibula.
1. With rupture of the medial collateral ligament.
 2. With fracture of the medial malleolus.

3. With fracture of the medial malleolus and Volkmann's lesion.
- C2. Suprasyndesmal injury, with multifragmented fracture of the diaphysis of the fibula.
1. With rupture of the medial collateral ligament.
 2. With fracture of the medial malleolus.
 3. With malleolomedial fracture and Volkmann's lesion.
- C3. Supraspinous injury, proximal fibula injury.
1. Without shortening, without Volkmann's lesion.
 2. With shortening, without Volkmann's lesion.
 3. With medial and Volkmann lesions(8,21).

Summarizing AO contains classifications for the whole body. The ankle is classified into (1) malleolar fractures, (2) distal tibial fractures and (3) fibular fractures. Within the malleolar fractures, the subclassifications correspond to the Danis-Weber ABC classification with the addition of a 2-digit suffix (range 1-3). The numbers correspond to an estimate of fracture severity(22).

The complexity of this classification makes it difficult to learn and apply, limiting interobserver reliability and reproducibility. There is the current pediatric AO classification, which is based on the Muller-Ao categorization for adults, but differs in that it takes into account the growth cartilage and the segmentation between metaphysis and epiphysis. Classifying in 3 main groups(8).

Figure 3. Pediatric AO classification.



Source: Ponzone A, Roncoroni A, Miscione F, Baroni EL, Dello Russo B (8).

In the AO/OTA classification, the most common infrasyndesmal fractures are A1 (isolated) with 68.9%, followed by A2 (bimalleolar) with 24.8% and then A3 (trimalleolar) with 6.3%. When compared with the Lauge-Hansen classification, the infrasyndesmal fractures correspond to the SAD type, with an incidence of around 10 and 20%. They can also be segmented into SAD I (transverse fibula fracture or avulsion fracture) or SAD II (associated vertical fracture of the internal malleolus). Transindesmal fractures represent about 85% of ankle fractures usually generated by a rotational mechanism, when an external rotational force is applied on the supinated foot (SER). In the AO/OTA classification, 44-B1 would be the most frequent with about 51.8%, followed by 44-B2 with 25.3% and then 44-B3 (22.9%).

Suprasyndesmal fractures represent type C of the Weber classification and, following the AO/OTA classification, 44C1 type fractures are the most common, representing about 5.3%,

followed by C2 and C3 with about 3.2% and 3.4%. According to the Lauge-Hansen classification, they are observed in pronation-rotation-external type fractures and in PA fractures(16,23).

Regarding interobserver and intraobserver reliability, studies showed that the most substantial is the Dennis-Weber classification, followed by Lauge-Hansen and then the AO/OTA. It was noted that the time restriction did not present a statistically significant effect on reliability. The simultaneous use of the Weber and Lauge-Hansen system is recommended, because it presents the highest reliability and reproducibility, in addition to generating a better understanding of the type of fracture(24).

CONCLUSIONS

The importance of fracture classification systems is crucial in the choice of treatment, both conservative and surgical, as well



as the future prognosis of the affected individual. The most frequent, recognized and used classification systems in ankle fractures at the moment are those of Lauge-Hansen, the AO/OTA system, Danis-Weber in adults and Dias-Tachjian in pediatrics. In addition to the classification systems cited in this article, there are others, which may have relevance depending on the individual situation. It is important to note that most of the classifications are based on a complementary study, such as radiographs or others, so knowing how to order the appropriate study and incidences helps in the future treatment of the patient with the aim of a speedy recovery.

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ASSESSMENT OF IMMUNIZATION COVERAGE AND DROPOUT RATES AMONG CHILDREN AGED 0-5 YEARS IN RURAL AREAS OF JAIPUR

Himanshi Mathur¹, Dr. Zafar Ejaz Khan², Dr. Sadakat Bashir³

¹MPH Scholar, Maulana Azad University, Jodhpur

²BDS, MPH, Ph.D. Faculty of Medicine, Public Health, Assistant Professor, Deptt of Public Health, Maulana Azad University, Jodhpur

³Assistant Professor, Deptt of Public Health, Maulana Azad University, Jodhpur

ABSTRACT

This study aims to assess immunization coverage and dropout rates among children aged 0-5 years in the rural areas of Jaipur. Immunization is a critical public health measure to prevent childhood diseases, yet many children in rural India do not receive the complete schedule of recommended vaccines. This cross-sectional study involved surveying caregivers of children aged 0-5 years in selected rural areas of Jaipur, collecting data on vaccination status, reasons for non-immunization, and demographic factors. The results indicate that while a significant proportion of children receive initial vaccinations, dropout rates remain high, particularly for subsequent doses. Factors such as socio-economic status, education level of caregivers, and access to healthcare facilities were found to influence both immunization coverage and dropout rates. The findings highlight the need for targeted interventions to improve vaccination outreach and education in rural communities. The potential impact of enhanced immunization programs and policies addressing the identified barriers could significantly increase coverage and reduce dropout rates, thereby improving public health outcomes for children in these regions.

KEYWORDS: Immunization coverage, Dropout rates, Rural health, Pedo Healthcare, Vaccination

INTRODUCTION

Immunization, a cornerstone of public health, has a profound global impact, significantly reducing the incidence of infectious diseases and associated morbidity and mortality among children. Its success stories include the eradication of smallpox and the near-eradication of polio worldwide, alongside substantial reductions in the prevalence of diseases such as measles, diphtheria, and pertussis. The importance of immunization is further underscored by its inclusion in the World Health Organization's (WHO) Expanded Program on Immunization (EPI) and the United Nations' Sustainable Development Goals (SDGs), which aim to ensure healthy lives and promote well-being for all at all ages.

Despite the global successes of immunization programs, considerable challenges remain, particularly in low- and middle-income countries (LMICs). India, home to a significant proportion of the world's children, faces substantial hurdles in achieving comprehensive immunization coverage. While national averages for immunization coverage have improved over the years, these figures often mask significant disparities within the country. Rural areas, in particular, exhibit lower immunization rates compared to urban centers, reflecting broader issues of healthcare access, socioeconomic disparities, and educational barriers.

Jaipur, the capital city of the Indian state of Rajasthan, presents an intriguing case for studying immunization dynamics due to its mixed urban and rural landscape. While the urban areas of Jaipur benefit from better healthcare infrastructure and higher

socioeconomic status, the rural regions struggle with limited access to healthcare services, lower literacy rates, and cultural barriers that impede immunization efforts. This dichotomy makes Jaipur an ideal setting for examining the factors influencing immunization coverage and dropout rates among young children.

The primary objective of this study is to assess the immunization coverage and dropout rates among children aged 0-5 years in the rural areas of Jaipur. Immunization coverage refers to the proportion of children who have received all the recommended vaccines by a certain age, while dropout rates indicate the proportion of children who start the vaccination schedule but do not complete it. High dropout rates are particularly concerning as they leave children vulnerable to diseases that could have been prevented with complete immunization.

Several factors contribute to the variability in immunization coverage and dropout rates in rural areas. Socioeconomic status is a critical determinant, with poorer families often facing greater challenges in accessing immunization services. Financial constraints, lack of transportation, and the opportunity cost of taking time off work to visit healthcare facilities can deter families from completing vaccination schedules. Education level of caregivers, particularly mothers, plays a significant role in immunization adherence. Mothers with higher levels of education are generally more aware of the benefits of immunization and are more likely to ensure their children receive all necessary vaccines. Healthcare



infrastructure is another vital factor influencing immunization coverage. Rural areas typically have fewer healthcare facilities, and those that exist may be under-resourced or difficult to access. Healthcare worker shortages, irregular vaccine supply, and inadequate cold chain maintenance can all hinder effective immunization delivery. Additionally, the quality of healthcare services, including the attitudes and behaviors of healthcare providers, can impact caregivers' willingness to bring their children for vaccination.

Cultural beliefs and practices also significantly affect immunization rates. In some rural communities, traditional beliefs and misconceptions about vaccines can lead to resistance against immunization. Fear of side effects, distrust of modern medicine, and reliance on traditional healers are common barriers. Community engagement and culturally sensitive health education are crucial in addressing these issues and improving immunization acceptance. The Indian government has implemented several programs to improve immunization coverage, such as the Universal Immunization Program (UIP) and Mission Indradhanush. These initiatives aim to provide equitable access to vaccines and enhance immunization awareness. However, the success of these programs in rural areas has been mixed, and dropout rates remain a concern. Understanding the specific challenges and barriers in rural Jaipur can inform targeted interventions to improve immunization outcomes.

This study adopts a cross-sectional design, surveying caregivers of children aged 0-5 years in selected rural areas of Jaipur. Data will be collected on vaccination status, reasons for non-immunization, and demographic factors. This approach allows for a comprehensive assessment of immunization coverage and dropout rates, as well as the identification of key determinants influencing these outcomes. By shedding light on the factors contributing to low immunization coverage and high dropout rates, this study aims to inform policy and practice in improving childhood immunization in rural Jaipur. Enhanced understanding of these issues can lead to the development of targeted strategies to overcome barriers and ensure that all children receive the full benefits of immunization. The ultimate goal is to reduce the burden of vaccine-preventable diseases and improve the health and well-being of children in rural areas of Jaipur.

In conclusion, immunization remains a cornerstone of public health, but achieving high coverage and reducing dropout rates in rural areas of LMICs like India requires concerted efforts. This study seeks to contribute to this endeavor by providing detailed insights into the immunization landscape in rural Jaipur, identifying barriers, and suggesting evidence-based interventions. Through this research, we hope to support the broader goal of universal immunization coverage and the protection of vulnerable children from preventable diseases.

REVIEW OF LITERATURE

The following review of literature provides a comprehensive overview of the current understanding of immunization status and drop out rates, drawing on recent studies and reviews.

Yadav et al. (2019) analyzed immunization coverage in rural India and found that socioeconomic status, maternal education, and access to healthcare services significantly influenced vaccination rates. Their comprehensive analysis highlighted stark disparities between urban and rural areas, emphasizing the need for targeted interventions to address these inequities. They also found that government initiatives, while beneficial, were not sufficiently reaching the most vulnerable populations. This study underscores the importance of understanding local contexts to improve health outcomes.

Anand and Kumar (2018) identified key barriers to immunization in rural settings, including lack of awareness, transportation difficulties, and cultural misconceptions. Their qualitative study revealed that many parents were unaware of the immunization schedule and its importance. Additionally, they noted that healthcare infrastructure in rural areas often lacked the necessary resources to support consistent immunization services. The study concluded that community health education and improved healthcare infrastructure are essential to overcoming these barriers.

Gupta et al. (2020) explored the impact of maternal education on immunization uptake in rural regions. They found that higher levels of maternal education were associated with increased likelihood of complete immunization among children. The study also highlighted that educated mothers were more likely to understand the benefits of vaccination and adhere to immunization schedules. Furthermore, the study suggested that educational programs targeting mothers could be a viable strategy to improve immunization rates in rural areas.

A study by Patra (2018) examined the socioeconomic determinants of immunization coverage in rural areas. The findings indicated that children from wealthier families had higher immunization rates, underscoring the role of economic factors in healthcare access. The research also showed that households with stable incomes were more likely to prioritize health services. Patra emphasized the need for economic support programs to assist lower-income families in accessing immunization services.

Sharma et al. (2017) studied the cultural influences on vaccination decisions in rural communities. They found that traditional beliefs and misconceptions about vaccines were major barriers to immunization. Many parents relied on traditional healers and were skeptical of modern medical practices. The study recommended culturally sensitive health communication strategies to address these issues. Engaging community leaders and leveraging local traditions were suggested as effective methods to improve vaccination acceptance.

Bose et al. (2020) highlighted the challenges faced by health systems in delivering immunization services in rural areas, including inadequate staffing, logistical issues, and poor supply chain management. Their case study from India illustrated that even when vaccines are available, the lack of trained healthcare workers and proper facilities can impede immunization efforts. The study called for improved training programs for healthcare



workers and better logistical support to ensure vaccine availability and administration.

Khan et al. (2019) evaluated the effectiveness of various immunization programs in rural India. They concluded that integrated community-based approaches were most successful in improving coverage and reducing dropout rates. The study also found that programs which involved local communities in planning and implementation were more effective. This highlights the importance of community engagement in public health initiatives.

Saxena and Kumar (2018) discussed innovative strategies to enhance immunization coverage in rural areas, such as mobile health units, digital tracking systems, and community health worker training programs. Their study demonstrated that mobile health units could reach remote areas effectively, while digital tracking systems helped monitor immunization schedules and coverage. They recommended these strategies as cost-effective methods to improve immunization rates in resource-limited settings.

Tripathi et al. (2019) focused on the issue of immunization dropout rates in rural regions. They identified key reasons for

dropout, such as forgetfulness, lack of awareness about subsequent doses, and logistical challenges. The study suggested solutions including better follow-up mechanisms, reminder systems, and incentives for caregivers to ensure children complete their vaccination schedules. The findings underscored the need for continuous engagement with families to reduce dropout rates.

RESEARCH OBJECTIVES

- To determine immunization coverage among children 0-5 years in rural areas of Jaipur
- To analyse dropout rates among children 0-5 years in rural areas of Jaipur
- To Examine barriers to Immunization in rural areas of Jaipur

RESULTS AND DISCUSSION

395 samples (children newborn to 5 years) were taken for the study to get insight into the immunization status in a rural area of Jaipur.

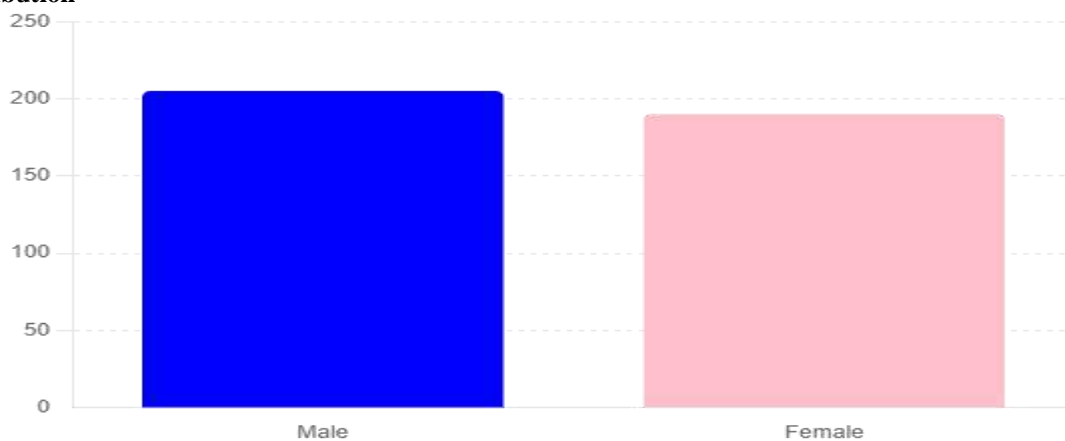
DEMOGRAPHIC TABLE: GENDER DISTRIBUTION

Gender	Frequency	Percentage
Male	205	51.9%
Female	190	48.1%
Total	395	100%

The demographic table on gender distribution shows that out of a total population of 395 individuals, there are 205 males, which accounts for 51.9% of the population. On the other hand, there are 190 females, making up 48.1% of the total population. This indicates a slight majority of males over females, with a

relatively balanced gender distribution overall. The total population is thus composed of just over half males and slightly less than half females, providing a foundational understanding of the population structure by gender.

Gender Distribution



DEMOGRAPHIC TABLE: AGE DISTRIBUTION

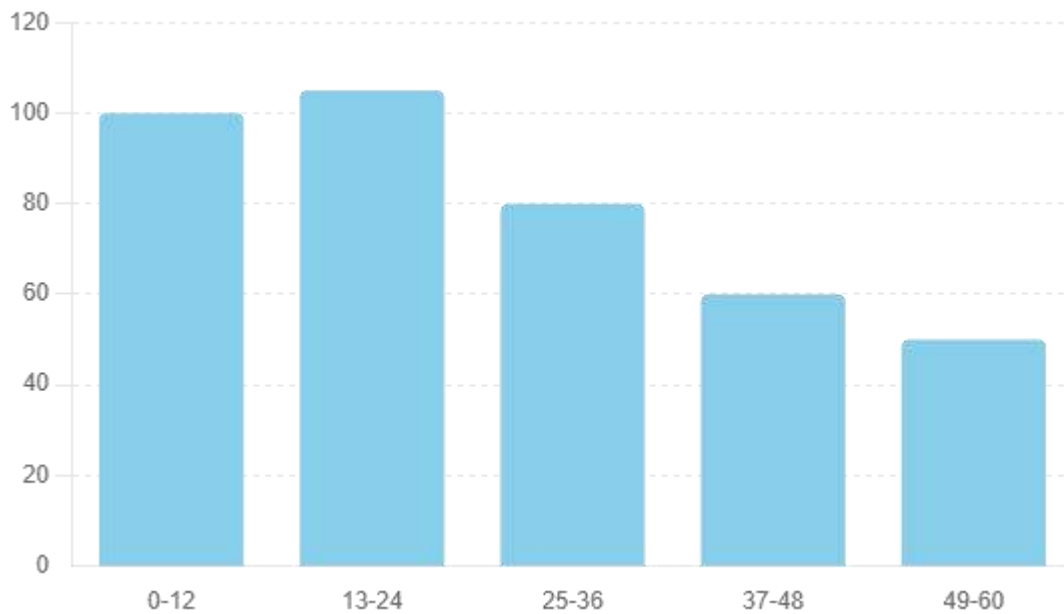
Age Group (Months)	Frequency	Percentage
0-12	100	25.3%
13-24	105	26.6%
25-36	80	20.3%
37-48	60	15.2%
49-60	50	12.6%
Total	395	100%



The demographic table on age distribution reveals that out of a total population of 395 individuals, the largest age group is 13-24 months, comprising 105 individuals and representing 26.6% of the population. This is followed closely by the 0-12 months age group, which includes 100 individuals, accounting for 25.3% of the population. The 25-36 months age group includes 80 individuals, making up 20.3% of the total population. The

37-48 months age group consists of 60 individuals, representing 15.2% of the population, while the 49-60 months age group has 50 individuals, making up 12.6% of the total population. This distribution indicates a relatively higher concentration of younger children within the population, with the majority being under 24 months old.

Age Distribution



DEMOGRAPHIC TABLE: SOCIOECONOMIC STATUS

Socioeconomic Status	Frequency	Percentage
Low	150	38.0%
Middle	190	48.1%
High	55	13.9%
Total	395	100%

The demographic table presents an overview of the socioeconomic status of a sample population, divided into three categories: low, middle, and high. Out of a total of 395 respondents, 150 individuals, or 38.0%, fall into the low socioeconomic status category. This indicates that a significant portion of the population faces economic challenges and may have limited access to resources and opportunities. The majority of the respondents, 190 individuals or 48.1%, belong to the middle socioeconomic status category, suggesting a relatively balanced distribution of income and access to

economic resources among the sample population. Lastly, 55 individuals, making up 13.9% of the total, are classified as high socioeconomic status, representing the segment of the population with the highest income levels and access to resources. The data highlights the distribution and proportion of different socioeconomic groups within the sample, providing a foundation for further analysis of the impact of socioeconomic status on various aspects of life.

IMMUNIZATION COVERAGE FREQUENCY TABLE

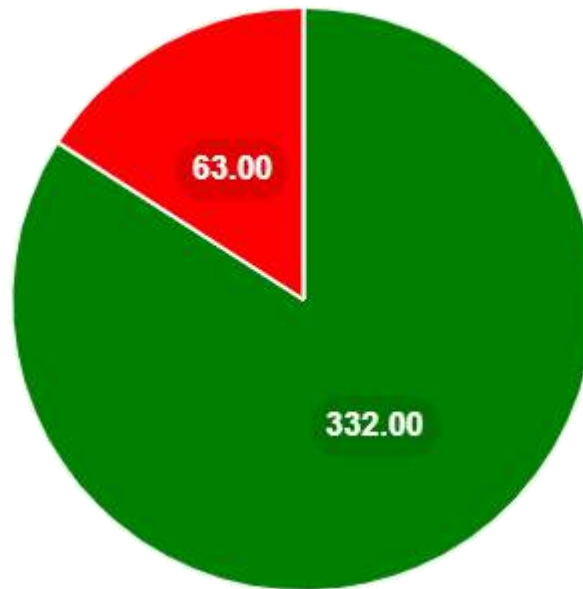
Immunization Status	Frequency	Percentage
Fully Immunized	332	84%
Dropped Out	63	16%
Total	395	100%

The immunization coverage frequency table provides insight into the immunization status of a sample population of 395 individuals. According to the table, 332 individuals, or 84%, are fully immunized. This high percentage indicates a strong immunization coverage within the population, suggesting

effective healthcare services and awareness programs. However, 63 individuals, representing 16% of the total sample, have dropped out of the immunization program.



Immunization Coverage



This dropout rate highlights a gap in the immunization coverage that may need to be addressed through targeted interventions to ensure that the entire population benefits from immunization

efforts. The table underscores the overall success of the immunization program while also pointing out areas where improvements are necessary to achieve complete coverage.

IMMUNIZATION DROPOUT BY VACCINE TYPE

Vaccine Type	Dropped Out	Frequency	Percentage
BCG	Yes	10	2.5%
DPT (1st Dose)	Yes	15	3.8%
Polio (1st Dose)	Yes	12	3.0%
Measles	Yes	26	6.6%

The table on immunization dropout by vaccine type provides detailed information on the dropout rates for various vaccines within the sample population. Out of the total population, 10 individuals, accounting for 2.5%, dropped out after receiving the Bacillus Calmette-Guérin (BCG) vaccine, which is crucial for protection against tuberculosis. The dropout rate increases slightly for the first dose of the Diphtheria, Pertussis, and Tetanus (DPT) vaccine, with 15 individuals or 3.8% not completing the immunization schedule. For the first dose of the

Polio vaccine, 12 individuals, or 3.0%, dropped out. The highest dropout rate is observed for the Measles vaccine, with 26 individuals, constituting 6.6% of the sample, failing to complete the immunization. This data highlights specific areas where dropout rates are more pronounced, particularly for the Measles vaccine, indicating a need for targeted strategies to improve completion rates across all vaccine types to ensure comprehensive immunization coverage.

REASONS FOR DROPOUT

Reason	Frequency	Percentage
Lack of Awareness	18	28.6%
Distance to Healthcare Facility	15	23.8%
Cultural Beliefs	10	15.9%
Fear of Side Effects	12	19.0%
Healthcare Worker Shortage	8	12.7%
Total	63	100%

The table detailing the reasons for dropout from immunization programs sheds light on various factors contributing to incomplete immunization among the sample population. The most significant reason, accounting for 28.6% of the cases, is a lack of awareness. This suggests that a considerable number of individuals are not adequately informed about the importance and schedule of immunizations. The second most common reason, cited by 23.8% of the respondents, is the distance to

healthcare facilities, indicating that accessibility issues are a major barrier to completing immunization schedules.

Cultural beliefs contribute to 15.9% of the dropout cases, reflecting how certain traditional views and practices can influence healthcare decisions. Fear of side effects is another substantial factor, responsible for 19.0% of the dropouts, highlighting the need for better communication and reassurance about vaccine safety. Lastly, a shortage of healthcare workers



accounts for 12.7% of the dropouts, pointing to systemic issues within the healthcare infrastructure that need to be addressed.

Overall, these reasons illustrate the multifaceted nature of immunization dropout and underscore the need for

comprehensive strategies that address awareness, accessibility, cultural sensitivities, safety concerns, and healthcare infrastructure to improve immunization coverage.

IMMUNIZATION COVERAGE BY AGE GROUP

Age Group (months)	Fully Immunized	Dropped Out	Total	Percentage Fully Immunized
0-12	80	20	100	80%
13-24	90	15	105	85.7%
25-36	70	10	80	87.5%
37-48	50	10	60	83.3%
49-60	42	8	50	84%
Total	332	63	395	84%

The immunization coverage by age group shows varying levels of coverage within a sample of 395 individuals. In the 0-12 months age group, 80% are fully immunized. This increases to 85.7% in the 13-24 months group, 87.5% in the 25-36 months group, and 83.3% in the 37-48 months group. For the 49-60

months group, the coverage is 84%. Overall, 84% (332 out of 395) of the individuals are fully immunized. These figures indicate generally strong immunization coverage with some variations among different age groups, suggesting a need for targeted efforts to improve coverage in certain age brackets.

IMMUNIZATION COVERAGE BY GENDER

Gender	Fully Immunized	Dropped Out	Total	Percentage Fully Immunized
Male	172	33	205	83.9%
Female	160	30	190	84.2%
Total	332	63	395	84%

The immunization coverage data reveals that there is a slight gender difference in the rates of fully immunized children. For male children, out of a total of 205, 172 were fully immunized, resulting in an immunization rate of 83.9%. Meanwhile, 33 boys started but did not complete the immunization process. On the other hand, for female children, 160 out of 190 were fully immunized, giving a slightly higher immunization rate of 84.2%, with 30 girls dropping out before completing the process.

When combining the data for both genders, a total of 332 children were fully immunized out of 395, leading to an overall immunization rate of 84%. This indicates that the immunization coverage is quite high overall, with a marginally higher rate for females compared to males. The small difference in immunization rates between boys and girls suggests a generally equitable approach to immunization across genders in the population studied.

CONCLUSION

The study "Assessment of Immunization Coverage and Dropout Rates Among Children Aged 0-5 Years in Rural Areas of Jaipur" provides significant insights into the immunization status and challenges in rural Jaipur. The findings reveal that while the overall immunization coverage is relatively high at 84%, there remains a concerning dropout rate of 16%. This indicates that although many children receive initial vaccinations, a substantial number do not complete the recommended immunization schedule. Key factors influencing dropout rates include lack of awareness, distance to healthcare facilities, cultural beliefs, fear of side effects, and healthcare

worker shortages. These findings highlight the need for targeted interventions to address these barriers and improve immunization completion rates in rural areas.

SUGGESTIONS

Enhance Awareness Campaigns: Implement comprehensive awareness campaigns to educate caregivers about the importance of completing the full immunization schedule. Utilize various media channels and community health workers to disseminate information effectively.

Improve Accessibility: Establish more healthcare facilities within accessible distances to rural communities or introduce mobile health units to reach remote areas. Ensuring that vaccines are available within close proximity can significantly reduce dropout rates.

Culturally Sensitive Interventions: Develop culturally tailored health education programs that address local beliefs and misconceptions about immunization. Engaging community leaders and traditional healers in promoting vaccination can help in overcoming resistance due to cultural beliefs.

Address Fear of Side Effects: Provide clear and accurate information about vaccine safety and potential side effects. Healthcare providers should be trained to communicate effectively with caregivers, addressing their concerns and reassuring them about the benefits of immunization.

Strengthen Healthcare Workforce: Increase the number of trained healthcare workers in rural areas and ensure they have



the necessary resources to carry out immunization programs. Regular training and support can help maintain high standards of immunization services.

Implement Reminder Systems: Develop reminder and follow-up systems, such as phone calls, text messages, or community health worker visits, to ensure caregivers are reminded of upcoming vaccination appointments.

Provide Incentives: Consider providing incentives for caregivers to complete the full immunization schedule for their children. This could include nutritional supplements, free medical check-ups, or other health-related benefits.

Policy and Programmatic Support: Advocate for stronger government policies and increased funding to support immunization programs in rural areas. Ensuring that immunization initiatives are well-funded and prioritized can lead to sustained improvements in coverage rates.

By addressing these key areas, it is possible to enhance immunization coverage and reduce dropout rates, thereby improving public health outcomes for children in the rural areas of Jaipur.

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CASE STUDY ON EFFECTS OF CONSTRUCTION ON THE AQUATIC LIFE

Akash B Jadhav*¹

Assistant - Professor, Department of Civil Engineering

ABSTRACT

The construction of any type's crossings to facilitate road schemes can potentially impact upon adjacent aquatic ecosystems. Such construction activity can pose a risk both to the physico-chemical and ecological quality of the aquatic environment. The EU Water Framework Directive requires member states to ensure that there is no further 'degradation in water quality' and to maintain 'good ecological and chemical status' of surface waters by 2015. In this context, it is important to understand the potential impacts of river-crossing construction and the methods for mitigating such impacts. This paper presents a critical review of current knowledge on such impacts, which is presented under three headings: water quality, river hydraulics and aquatic ecology. The review has identified knowledge gaps in all three areas, with the issue of the impact of suspended solids on aquatic ecosystems being a priority. The review concludes that some water quality standards may not provide sufficient regulatory control of discharges to the aquatic environment from river-crossing construction activities.

KEYWORDS: River, construction, suspended solids; aquatic ecology; water quality; hydraulics

INTRODUCTION

Freshwater systems and associated ecological processes are intimately linked to their drainage basins and, consequently, are under pressure from a wide range of land-use activities. In particular, the construction of river crossings to facilitate motorways poses the risk of severe and, in some cases, lasting damage to the physical, chemical and ecological quality of the aquatic environment. With the introduction of the EU Water Framework Directive in 2000 it is imperative to understand and mitigate potential impacts relating to river. A considerable body of research has been undertaken, both at the field and at the laboratory scale, concerning the impact of road construction activities on the aquatic environment. This review attempts to summarise the relevant literature. It is presented under the following topics: (a) water quality, (b) river hydraulics and (c) aquatic ecology. Although the focus of this review is on road crossings of watercourses, the findings may be applicable to other watercourse crossing activities, such as underwater pipelines or railway bridge crossings. From a review of the literature, the main impact of river-crossing construction would appear to be the generation of an increase in the concentration of sediment, mainly suspended solids

METHODOLOGY

- Study on Aquatic life and construction
- History of Construction
- Different effects on aquatic life
- Preparations of details report
- Result and conclusion

MODELING AND ANALYSIS



Effect on Different Parts

1. Effect on water quality

As sediment input is a concern during watercourse- crossing construction, we have compiled information on existing standards. River crossings that are poorly designed can disrupt natural river hydraulics and cause such problems as increased erosion, flooding due to change in flow, blockage by debris and fragmentation of in-stream and riparian habitats. Inappropriately positioned culverts or bridge piers that are constructed without adequate understanding of river flow dynamics can result in scour and erosion. The turbidity of water get change and it affect



Marine life respiratory system

Range for turbidity

For River 10 to 20 NTU

Sea Water 0.1 to 28.7 NTU

Where NTU- Nephelometric turbidity unit (Means presence of suspended solids)

2. Water Velocity

Stream water velocity and culvert geometry are related by the continuity principle of hydrodynamics. The cross-sectional area of the culvert must be sufficient to maintain water velocities below threshold limits. However, excessively wide culverts may result in very low water velocities, which may lead to deposition of SS and inadequate water depths for fish passage. Therefore, to achieve the desired velocity range under flow extremes, it may be necessary to provide, for example, twin-box culverts, one aperture for dry weather flows and the second for storm flows

3. Water Depth

Culverts should be designed so that fish passage is achievable even in low flow conditions. Minimum allowable water depths for salmonid fish vary from country to country, ranging from 100 mm to 304 mm according to the requirements of the target species and life stage. Minimum water depth guidelines are generally set for salmonid fish, although the Alaskan guidelines require the minimum water depth to be set for particular target species. If the low-flow water depth allows the passage of the largest fish species in that river system, then it should be passable by all fish

4. Effect on Vegetation

Suspended solids have a predominant influence on the compensation point in a water column (the depth at which photosynthesis equals respiration in plants) and are therefore a key determinant in the distribution of submerged aquatic vegetation. Vegetation from river-crossing construction sites can influence a number of in-stream processes, such as temperature regulation. So as a result it decreases vegetation which directly affects the food production for marine life

RESULT AND DISCUSSION

In conclusion, there is demonstrable evidence that, in the absence of careful environmental management, the construction of river crossings has the potential to generate elevated inputs of sediment that may impact adversely on aquatic environments, both in the short and long term. There is, however, a paucity of data regarding long-term effects. Finally, there is a considerable body of literature detailing best practice with respect to the design and construction of watercourse crossings to ensure aquatic connectivity for native species. However, the effectiveness of some measures has not been adequately assessed.

It is also clear from this review that river-crossing construction may, potentially, pose barriers to fish movement. There is little evidence that bridges obstruct the passage of fish. On the other hand, there is ample evidence in the literature to demonstrate how incorrect culvert construction can impede fish passage. This review also highlights the variability of guidelines pertaining to

facilitation of fish passage. For example, the maximum allowable water velocity to enable safe fish passage through culverts is shown to vary considerably. This literature review has identified current knowledge gaps relating to the potential impacts on aquatic systems from river crossing construction and the appropriateness of mitigation measures. River crossings do not necessarily have to cause negative impacts and, with careful planning, habitats can be considerably improved

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EFFECT OF SIMPLIFIED MOVEMENT GAMES ON SELECTED MOTOR PROFICIENCY VARIABLES AMONG SCHOOL GIRLS

S. Preethi Prisilla¹, Dr. S. Thirumalai Kumar²

¹Ph.D. Scholar, Department of Physical Education, Tamil Nadu Physical Education and Sports University
Chennai 600127

²Professor, Department of Physical Education, Tamil Nadu Physical Education and Sports University,
Chennai 600127

ABSTRACT

The study aimed to determine the effect of Simplified movement games on selected motor proficiency variables among school girls. To achieve this purpose 60 school girls were selected from Chennai District and they were divided into control groups and experimental groups each consists thirty subjects. Group one underwent simplified movement games and group two underwent a combination of simplified movement games and motor proficiency variables. Pre and Post-tests were conducted prior to and after the experimental training. The collected data were analyzed statistically with the Analysis of Covariance and Scheffe's Post hoc test. The analysis revealed the effect of simplified movement games on selected motor proficiency variables among school girls. The results proved that the simplified movement has significantly improved a positive effect on motor proficiency variables among school girls.

KEYWORDS: simplified motor movement games, Motor proficiency variables, school girls

INTRODUCTION GIRL CHILD

A child is a boy or girl yet to become an adult. Children are tomorrow's citizens; thus, ensuring good health for children is extremely important. Girl child health plays a vital role in the development of a country. Girls' Education strengthens economics and reduces inequality. It contributes to more stable, resilient societies that give all individuals-including boys and men -the opportunity to fulfill their potential. But education for girls is about more than access to school. It's also about girls feeling safe in classrooms and supported in their subjects and careers. Girl child refers to the sequence of physical, language, thought, and emotional changes that occur in a child from birth to the beginning of adulthood.

MOTOR PROFICIENCY

Motor proficiency is determined by qualitatively different aspects of both gross and fine motor development and serves as an index of children's motor development. (Bruininks, 1978).

ROLE OF MOTOR PROFICIENCY DEVELOPMENT

Motor development is a progressive change in movement behavior throughout the life cycle brought about by interaction among the requirements of the movement task, the biology of the individual, and the condition of the learning environment (David L. Gallahue, 2003). Children will develop 2 types of motor (movement) skills: 'fine' motor skills and 'gross' motor skills. Fine motor skills involve using hands and fingers to control smaller objects. Gross motor skills involve the coordination of larger muscles in the body to make larger movements. Fine motor skills

engage the smaller muscles in the hands and fingers so a child can grasp, hold, grip, and pinch. picking up food, holding a pencil, or buttoning up a shirt all involve fine motor skills. Gross motor skills that involve the movement of the larger muscles in the arms, legs, and torso, such as crawling, running, jumping, and throwing are called gross motor skills (David L. Gallahue, 2003).

MOVEMENT GAMES

The act or process of moving, change of place or position or posture. Movement activities also called gross motor activities, are games, actions, or activities of any kind that engage the large muscles of the body, thereby building gross motor coordination. Movement and play keep the body healthy and build coordination and strength. Some types of movement result in a change of place, they are termed locomotion. walking, cycling, running and swimming are some of the locomotory movements.

PURPOSE OF THE STUDY

The purpose of the study was to find out the effect of simplified movement games on selected motor proficiency variables among school girls.

HYPOTHESES

It was hypothesized that there would be a significant improvement in gross motor skills due to simplified movement games among school girls.



It was hypothesized that there would be a significant improvement in fine motor skills due to simplified movement games among school girls.

DELIMITATIONS

1. Only sixty school girls were selected Chennai district.
2. The age range between 6 to 10 years only.
3. Only simplified movement games are selected as independent variables.
4. Gross motor skills and fine motor skills were selected as a dependent variable.

LIMITATIONS

1. The differences that exist among the subjects due to varied factors such as heredity, food habits, family type, weight, and health factors will not be considered.

SELECTION OF VARIABLES

Independent Variables

- Simplified movement games
 1. Beam Balance walk with Ball
 2. Balancing Ball with Cone Zig Zag Walk
 3. Rope with a jump run
 4. Catch the tail
 5. Imitations of body parts
 6. Oops with the leg jump
 7. Catching the ball using the upper part
 8. Ball rolling
 9. Bambole race
 10. Cone fixing race

Dependent Variables

Motor development skills: Fine motor and Gross motor

METHODOLOGY

SELECTION OF SUBJECTS

The purpose of the study was to find out the effect of simplified movement games on selected motor proficiency variables among school girls. To achieve this purpose sixty children were selected from Chennai District and they were divided into two experimental groups each consists thirty subjects. Group one underwent simplified movement games, group two underwent a combination of simplified movement games and motor proficiency variables among school girls. Pre and Post-tests were conducted prior to and after the experimental training. Pre and Post-test were conducted prior to and after the experimental training through standardized tests. The training program will be scheduled for an hour 5 days/ week for both groups.

STATISTICAL TECHNIQUE

The collected data were analyzed statistically with the Analysis of Covariance and Scheffe’s Post hoc test.

RESULTS AND DISCUSSION

Table - I Analysis of Covariance

Variables	Test	Simplified Movement games	Combined group	SV	SS	Df	MS	F
Fine motor	Pre-test	1255	1265	B	1083.33	2	541.67	0.32
				W	96375	57	1690.79	
	Post test	1240	1197.5	B	27250	2	13625	5.98
				W	129875	57	2278.51	
	Adjusted	1242.46	1194.02	B	33409.29	2	16704.65	9.79
				W	95568.90	56	1706.59	
Gross motor	Pre-test	18.1	18.25	B	0.43	2	0.22	0.18
				W	68.5	57	1.20	
	Post test	17.6	18.9	B	17.73	2	8.87	6.96
				W	72.6	57	1.27	
	Adjusted	17.62	18.05	B	14.97	2	7.49	8.79
				W	47.70	56	0.85	

***Significant: Table Value requires 3.15**

The above table- I above shows that there was no significant difference between groups at the pre-test level which indicates that there were no differences among the the groups at the initial stage and proved that the groups were equally distributed. However, due to the training effect, there was a significant difference in the post and adjusted post-test which indicates the

effectiveness of all the experimental training programs. The combined group of simplified movement games and the isolated training groups proved to be effective in improving the motor proficiency variables with the movement games among school girls. Further Scheffe’s Post test was used for pairwise comparison.



TABLE – II Scheffe’s post hoc test

Variables	Combined group	Simplified Movement games	MD	CI
Fine motor	1194.02	-	48.47	33.20
	-	1242.92	3.51	33.20
	1194.02	1242.49	51.97	33.20
Gross motor	18.83	-	1.21	0.74
	-	18.05	0.43	0.74
	18.83	18.05	0.78	0.74

The above table indicates the pairwise comparison and indicates the supremacy of the combined group over the isolated training groups. The combined group showed better significant improvement in simplified movement games due to motor proficiency than the other isolated training groups among school girls.

CONCLUSIONS

1. The results showed that simplified movement games significantly improved gross motor skills among school girls.
2. The results showed that simplified movement games significantly improved fine motor skills among school girls.
3. Thus, the results showed that simplified games have significantly improved a positive effect on motor proficiency variables among school girls.

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SCHOOL ENVIRONMENT AND ACADEMIC ACHIEVEMENT OF HIGH SCHOOL STUDENTS

Dr. C. Maria Ugin Joseph

Principal Cum Professor, A.K.T. Memorial College of Education, Neelamangalam, Kallakurichi – 606202

ABSTRACT

There are many factors responsible for the academic achievement of high school students. To state a few examples such as good teachers, study habits, certain psychological factors, home environment, social environment, peer relation etc. School environment must be conducive for the students for their study. Half of the day is spent in the school and the students see many people like their teachers, administrative officers, and other fellow students, in today's context, the schools are facing many hurdles to maintain a good atmosphere for teaching the students. Therefore this study aims at throwing some the school environment and academic achievement of high school students. The study was conducted in Kallakurichi, one of the educational districts of Tamil Nadu and survey method was deployed. The sample was divided into different categories on the basis of gender and medium of instruction. Covering the entire population is not possible for the present study. The current academic year high school students (2024-25) were selected and 300 samples were considered for the present study. The present study highlights that the school environment does not affect their academic achievement. It is presumed that the students perceive a conducive atmosphere in the school and it has neither positive nor negative effect on their achievement. Besides this there may be some other factors such as parents encouragement, peer support, teachers' role model etc which will have a positive impact on the high school students. The school environment as perceived by high school students was found to be at moderate level which indicates that the school administrators, teachers should undertake every step to develop and ensure a healthy and friendly environment in schools.

KEY WORDS: School Environment, Academic Achievement, High School Students

INTRODUCTION

There are many factors responsible for the academic achievement of high school students. To state a few examples such as good teachers, study habits, certain psychological factors, home environment, social environment, peer relation etc. School environment must be conducive for the students for their study. Half of the day is spent in the school and the students see many people like their teachers, administrative officers, and other fellow students, in today's context, the schools are facing many hurdles to maintain a good atmosphere for teaching the students. Factors such as noise pollution, lack of amenities, stressful teachers, technological disturbances due to overuse of mobile phones by teachers and students bring in nuisance in the academic activities.

School environment is a powerful force and plays a pivotal role in the all-round development of a child. Students look at their teachers as heroes and try to imitate their behavior. All students may get sufficient facility at home to study, especially rural students. and therefore, the school must create congenial and ideal environment for the students to study. Home is the first school and school is the second home. The Kothari Commission (1964-66) rightly pointed out that the destiny of India is being shaped in her classroom because students are the future and backbone of the country. John Dewey defined, "school has that environment, where some quality of life and certain activities and occupations are provided for securing child's development along desirable lines". Therefore this study aims at throwing

some the school environment and academic achievement of high school students.

REVIEW OF LITERATURE

Arul Lawrence (2012) in his study on 'School Environment and Academic Achievement of standard IX students' tried to find the relationship between School Environment and Academic Achievement of standard IX students. Data for the study were collected using self-made School Environment Scale (SES). The investigator used stratified random sampling technique for selecting the sample. The sample consists of 400 standard IX students. For analyzing data 't' test and Pearson's product moment co-efficient were the statistical techniques used. Finding shows there was no significant relationship between School Environment and Academic Achievement of standard IX students.

Vipul Kumar Narang (2020) opined that schools are considered as life building place for everyone. Our society also looks towards the school environment and academic achievement level of the particular schools. Therefore, academic achievement has become an index for child's future particularly so in high competitive world. The present study focuses upon school environment on academic achievement of secondary school students of Tehsil Abohar. For this purpose, descriptive survey method was followed with the standardized tool 'School Environment Inventory' developed by Dr. K. S. Misra (Allahabad) for a sample of 100 students from four senior



secondary schools From each category of school 25 students including male and female of class (X) ten has been randomly selected for the study. The study revealed that there is no significant relationship between the school environment and academic achievement of senior secondary students. It is also concluded that there is no significant difference in school environment of male and female students of senior secondary schools but there is significant difference in academic achievement of male and female students of senior secondary schools

NEED AND SIGNIFICANCE OF THE STUDY

The selected variable of the study can be put into research as many times as possible at different contexts. The reason for this may be due to its uniqueness. As each individual is unique, so as the school. The environment is schools keeps changing as the result of social change, cultural adaptation, and application of technology and like. A good school provides an atmosphere in which each one is respected as an individual. Sometimes over dominating attitude of teachers, partial attitude of teachers, over weightage of curriculum, parents’ high aspiration may affect the achievement of students. Keeping all these in mind the investigator identified this problem and undertook for research.

OBJECTIVES OF THE STUDY

The study was undertaken having the following objectives in mind.

- To study the level of school environment of high school students.
- To study the level of academic achievement of high school students.
- To study the relationship between school environment and academic achievement.
- To find out if there is any significant difference between male and female students in their school environment.
- To find out if there is any significant difference between Tamil and English medium students in their school environment.
- To find out if there is any significant difference between male and female students in their academic achievement.
- To find out if there is any significant difference between Tamil and English medium students in their academic achievement.

ANALYSES OF DATA

Table 1: School Environment Score of entire sample

Variable	Low		Moderate		High	
	N	%	N	%	N	%
School Environment	20	6.66	251	83.66	29	9.66

It is inferred from the above table that 6.66% have low level, 9.66% have high level and 83.66% have moderate level of school environment. This finding shows that majority of

HYPOTHESES OF THE STUDY

- The level of school environment of high school students is high.
- The level of academic achievement of high school students is high.
- There is no significant relationship between school environment and academic achievement.
- Male and female students do not differ significantly in their school environment.
- Tamil and English medium students do not differ significantly in their school environment.
- Male and female students do not differ significantly in their academic achievement.
- Tamil and English medium students do not differ significantly in their academic achievement.

METHOD OF STUDY

The study was conducted in Kallakurichi, one of the educational districts of Tamil Nadu and survey method was deployed. The sample was divided into different categories on the basis of gender and medium of instruction.

SAMPLE OF THE STUDY

Covering the entire population is not possible for the present study. The current academic year high school students (2024-25) was selected and 300 samples were considered for the present study.

TOOL USED IN THE PRESENT STUDY

- School Environment Scale prepared and validated by Rajendran (2015)
- Academic Achievement score collected from the recent examination.

RELIABILITY AND VALIDITY OF THE TOOLS

The reliability of the school environment scale was established by split-half method and it was found to be 0.84 which is reliable. The content validity of the tools was established by getting opinion from the experts in educational research.

STATISTICAL TECHNIQUES USED IN THE STUDY

For analyzing data, mean, standard deviation 't' test and correlation analyses were used in the present study..

students have moderate level of school environment. It is concluded that the level of school environment of high school students is not high but moderate.



Table 2: Academic Achievement Score of entire sample

Variable	Low		Moderate		High	
	N	%	N	%	N	%
Academic Achievement	50	16.7	192	64	58	19.3

It is inferred from the above table that 16.7% have low level, 19.3% have high level and 64% have moderate level of academic achievement. This finding shows that majority of

students have moderate level of academic achievement. It is concluded that the level of academic achievement of high school students is not high but moderate.

Table 3: Correlation between School Environment and Academic Achievement

Variable	N	'r'	Level of Significance
School Environment Academic Achievement	300	0.034	Not Significant

It is inferred from the above table that the calculate 'r' value 0.034 is less than the table value 0.113 at 0.05 level of significance. Hence the hypothesis that 'there is no significant

relationship between school environment and academic achievement' is accepted.

Table 4: Mean, SD, t-value based on gender for school environment score

Gender	Number	Mean	SD	t-value	Significant Level
Male	132	138.22	14.49	0.351	Not Significant
Female	168	137.65	12.92		

From the analysis of scores of the above table, it is found that mean score of male students is somewhat similar to that of female students. The calculated t-value 0.351 is not significant

at 0.05 level. Hence, Male and female students do not differ significantly in their school environment is accepted.

Table 5: Mean, SD, t-value based on medium of instruction for school environment

Medium	Number	Mean	SD	t-value	Significant Level
English	146	136.99	15.3	1.12	Not Significant
Tamil	154	138.77	11.79		

From the analysis of scores of the above table, it is found that mean score of English medium students is somewhat similar to that of Tamil medium students. The calculated t-value 1.12 is

not significant at 0.05 level. Hence, Tamil and English medium students do not differ significantly in their school environment is accepted.

Table 6: Mean, SD, t-value based on gender for academic achievement score

Gender	Number	Mean	SD	t-value	Significant Level
Male	132	307.5	55.84	2.87	Significant
Female	168	289.77	49.2		

From the analysis of scores of the above table, it is found that mean score of male students higher than that of female students. The calculated t-value 2.87 is significant at 0.05 level. Hence,

male and female students do not differ significantly in their academic achievement is rejected.

Table 7: Mean, SD, t-value based on medium of instruction for academic achievement

Medium	Number	Mean	SD	t-value	Significant Level
English	146	297.9	58.17	0.105	Not Significant
Tamil	154	297.26	47.5		

From the analysis of scores of the above table, it is found that mean score of English medium students is somewhat similar to that of Tamil medium students. The calculated t-value 0.105 is not significant at 0.05 level. Hence, Tamil and English medium students do not differ significantly in their academic achievement is accepted.

FINDINGS OF THE STUDY

- The level of school environment of high school students moderate.
- The level of academic achievement of high school students is moderate.
- There is no significant relationship between school environment and academic achievement.



- Male and female students do not differ significantly in their school environment.
- Tamil and English medium students do not differ significantly in their school environment.
- Male and female students differ significantly in their academic achievement.
- Tamil and English medium students do not differ significantly in their academic achievement.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The present study highlights that the school environment does not affect their academic achievement. It is presumed that the students perceive a conducive atmosphere in the school and it has neither positive nor negative effect on their achievement. Besides this there may be some other factors such as parents encouragement, peer support, teachers' role model etc which will have a positive impact on the high school students. The school environment as perceived by high school students was found to be at moderate level which indicates that the school administrators, teachers should undertake every step to develop and ensure a healthy and friendly environment in schools.

CONCLUSION

Students' achievement will be better if the schools provide them favourable conditions and opportunities. School is a place where a second home is created for students to learn desirable behavior. School administration can take adequate measures to modify the environment and enhance academic achievement.

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OVERCOMING OBSTACLES: ADDRESSING THE CHALLENGES IN COMBATING VIOLENCE AGAINST WOMEN AND CHILDREN

Hanna Nadia B. Amasol

*Master of Science in Criminal Justice with Specialization in Criminology
Cicosat Colleges, Lingsat, City of San Fernando, La Union*

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ABSTRACT

Since women and children are often the main victims because of their vulnerability and inability to stand against people in situations of positions of power, violence against women and their children, or VAWC, is a growing concern in communities. In order to protect women's and children's rights, the R.A. No. 9262 or the Violence Against Women and Their Children Act was passed in 2004. educates women about their rights and protects children from abuse in any form in the Philippines.

Using a qualitative method, this study concentrates on in-depth interviews with participants in VAWC programs, such as Philippine National Police (PNP), barangay officials, and civilians. The objective is to evaluate the impact of these programs in preventing and lessening violence against women and children and to make recommendations for how to make them better.

It's important to recognize the challenges facing programs that seek to prevent violence against women and children since it makes it easier to determine the ineffective aspects of the programs. By being aware of these challenges, we can develop strategies to enhance the programs and increase the effectiveness of safeguarding sensitive persons. Additionally, it guarantees more complete satisfaction of the requirements of women and children and a wise utilization of resources.

KEYWORDS: Violence Against Women and Children Act of 2004, Philippine National Police, Violence, Republic Act 9262, Programs

INTRODUCTION

Violence is the use of physical force to hurt, abuse, harm, or destroy. World Health Organization definition of violence, it is the intentional use of physical force or power, threatened or actual, against oneself, another person or against a group of community, that results or has a high probability of causing injury, death, psychological harm, maldevelopment or deprivation (Hittle, 2022).

According to research published in 2021 by the Office of Women's Health, violence against women raises the chance of mental illness as well as major physical health issues. Abuse and violence have an effect on families and children in addition to women. Early exposure to violence increases the likelihood that children would carry on the abuse cycle as adults, either as offenders or victims. Further research by Smith et al. (2017) highlights that children who see or experience violence are more likely to face behavioral and mental health problems, which lends credence to this intergenerational cycle of abuse.

Feminist Theory study of Conway, et al (2016), the theory posited on violence which gender blind and without a feminist lens inevitably results in the presentation of the dominant patriarchal perspective. Consequently, the way male subjects perceive violence is exhibited, thereby rendering the theory partial. A feminist perspective however provides a deeper understanding of violence by analyzing how it is connected to, and embedded in, patriarchal structures of power. Research

over more than 30 years from around the world clearly indicates that domestic abuse as understood and defined is primarily perpetrated by men against a female partner of ex-partner (Rivano, 2022).

According to Sullivan, C. M., & Hodge, D. R. (2021), This review explores the long-term mental health consequences of child abuse, including the development of anxiety, depression, and post-traumatic stress disorder (PTSD). It synthesizes recent research findings to understand how childhood abuse impacts mental health over the lifespan. Recent advances in trauma-informed care for survivors of child abuse were also conducted. It discusses the principles of trauma-informed care and evaluates their effectiveness in supporting recovery and improving outcomes for abused children (Lundy, M., & Lanktree, C. B., 2021).

According to Atienza (2020), the Department of Social Welfare and Development (DSWD) has vowed to continuously implement protective programs and services for victim-survivors of violence against women and children (VAWC). The DSWD said it provides the following assistance to victim-survivors of abuse: psychosocial care, psychosocial counseling, psychological/ psychiatric tests, provision of professional health services, referral for medico-legal examination, and provision of mechanisms for protection from mental, emotional, physical, sexual abuse, and other forms of exploitation. Under Republic Act (R.A.) 9262, the 12 agencies



under the Council are mandated to 'formulate programs and projects to eliminate VAWC based on their respective mandates, develop capability programs for their employees to become more sensitive to the needs of their clients, and to monitor all VAWC program.

This study aims to give awareness about anti-VAWC Programs to the public especially to Barangay officials and residents through the help of the police officers. It aims to acquire knowledge on how beneficial the programs to the community. Lastly, it also aims to give awareness and improve the challenges to police officers who implements the anti-VAWC Programs for the innovation and betterment in connection with the implemented anti-VAWC Programs.

OBJECTIVES OF THE STUDY

This research aims to achieve the following objectives:

1. Examine the common types of violence against women and children (VAWC) in home, institutional, and community settings to learn about their trends, root causes, and effects on victims.
2. Analyze the variety of Anti-VAWC programs that are presently being carried out by different entities, including governmental bodies, nonprofits, and neighborhood associations, emphasizing their approaches, outcomes, and opportunities for development.
3. Identify and analyze any challenges that law enforcement officials, social workers, and program managers encounter while putting Anti-VAWC programs into practice. These problems may include a lack of resources, legal roadblocks, and cultural hurdles and provide suggestions for improving the effectiveness of the program.

METHODS

The study utilized qualitative methods to fully examine the subject matter. To obtain detailed information about the participants' thoughts, feelings, and experiences, the researcher used intense interviews, which are open-ended and generally unstructured. Purposive random sampling was used to identify ten participants, who were picked based on their suitability for the research and capacity to offer insightful responses.

An interview guide served as the primary data collection tool, with unstructured questions designed to gather essential information. The interview questions focused on identifying the challenges faced by law enforcers in implementing Violence Against Women and Children (VAWC) programs. Participants, including law enforcers from the Women and Children's Protection Desk, barangay officials, and residents of Pangasinan responded based on their knowledge and experiences.

The researchers sought permission to record the interviews, and the collected data were carefully analyzed using the thematic method. Thematic analysis is a qualitative research method used to find and analyze patterns and trends in the collected data. In this approach, the data was examined to uncover common themes and ideas that arose from the participants' responses. In

order confirm and collect the study's conclusions, researchers analyze the raw data in order to obtain and arrange relevant details from participant responses.

RESULTS AND DISCUSSION

This chapter represents the results and discussion of gathered data about Violence Against Women and their Children (VAWC) Program. The data pertain the narrative of the program, to the participants based on their experience on the program and also on how they implement the program.

1. What are the common types of violence against women and children (VAWC) occurring in home, institutional, and community settings, and what are their trends, root causes, and effects on victims?

PHYSICAL, PSYCHOLOGICAL, ECONOMIC AND SEXUAL ABUSE

According to the information provided by participants, physical abuse is the most common VAWC performed since it begins with a simple misunderstanding and progresses to physical assault. Economic, sexual, and psychological abuse are also being inflicted since these instances and the typical times they happen to differ and the victims are primarily housewives and youths.

Participant's husbands are abusing them, threatening to kill them. They are also prohibited from working. This is what's commonly called domestic abuse or intimate relationship violence. This kind of violence encompasses both physical and psychological abuse, when victims experience beatings or other physical harm. In psychological abuse, victims are made to feel intimidated and afraid for their lives. Another form of control and economic abuse is when someone restricts their ability to work in an effort to lessen their financial autonomy and independence.

2. How are different Anti-VAWC programs currently being implemented by government bodies, nonprofits, and neighborhood associations, and what are their approaches, outcomes, and areas for improvement?

Anti-VAWC activities include conducting lectures, visiting VAWC desks, and distributing pamphlets. Concerning VAWC activities, informational conversations for citizens, and Talakayan sa Hapagkainan. The Republic Act No. 9262, also referred to as the "Anti-Violence Against Women and Their Children Act of 2004," is brought to the public's attention through these acts.

BARANGAY INITIATIVES

A number of efforts in the participant's community aim to reduce violence against women and children (VAWC). Every barangay has a designated VAWC desk where they actively participate in awareness-raising activities. To make sure that everyone in the community is informed and aware, these include talks and lectures that are not just aimed at women but also include males.

Programs are made to inform and empower both men and women, assisting them in identifying warning signs of abuse



and comprehending their rights and obligations. The programs encourage a group effort to stop violence and make the world a safer place by involving males in these awareness-raising events. The goal is to increase awareness of VAWC in the community and to motivate proactive efforts to stop abuse and assist victims.

TALAKAYAN SA HAPAGKAINAN

Through the simple and casual "Talakayan sa Hapagkainan" Program, local residents can speak with police officers face-to-face about domestic issues. In an open forum, the show profiles both offenders and victims and examines the root reasons of violence.

Based on participant feedback, the "Talakayan sa Hapagkainan" is done on a regular basis. Officers facilitate the conversations at these gatherings as everyone in the neighborhood eats together. This strategy is thought to be successful because it encourages community members to cooperate and participate more. A communal feast's relaxed atmosphere promotes involvement and openness which facilitates discussing and comprehending the problems surrounding violence in the neighborhood.

EDUCATIONAL SEMINARS

The local council invited community people to take part in educational seminars about violence against women and children (VAWC) as part of our symposium program. The purpose of these symposiums is to raise public awareness of VAWC and to educate residents on the relevant legislative framework, which is Republic Act 9262, which tackles violence against women and their children.

Comprehensive explanations of Republic Act 9262, which provides victims of domestic violence with legal safeguards and processes, are provided to participants. The goal of the public education seminars is to educate individuals about their rights, readily available resources for help, and what to do if they or a loved one becomes a victim of violence. The program's objective is to increase public knowledge of this law and its meaning so that individuals can recognize and report instances of misuse when they happen.

3. What challenges do law enforcement officials, social workers, and program managers face when implementing Anti-VAWC programs, including issues such as resource limitations, legal obstacles, and cultural barriers, and how can these programs be made more effective?

The challenges that implementers confront include the issue of government funding needed to maintain program operations and the issue of cases being dropped.

RESOURCE CONSTRAINTS

Due to limited resources, the barangay often discovers it difficult to assist when financial problems occur and may need to refer cases to government agencies. This is especially true when there aren't enough finances available for the budget.

When putting programs into action, issues with teamwork and the successful completion of tasks usually surface. For

example, setting up talks and lectures necessitates the provision of basic supplies including food, gear, and transportation. It is difficult to meet these logistical requirements with just barangay money. Although the participants are dedicated to their tasks, they are also limited financially and may not always be able to cover the entire cost of running the program. In order to close these budgetary gaps, it becomes necessary to ask the Local Government Unit (LGU) for assistance. Obtaining the extra funding required to carry out programs successfully and guarantee that they are well-supported and able to achieve their goals requires active engagement with the local government.

In general, working with government agencies to augment the barangay's resources is necessary to address financial obstacles in program implementation. This ensures that programs are not only doable but also successful in accomplishing their objectives.

DISCONTINUANCE OF ACTION

According to the participants, even when a lawsuit has already been filed in court, situations usually conclude when a woman's husband makes amends with her. The woman may decide to withdraw the complaint if her spouse makes amends and gets back together. The issues when the participants deal with tend to involve cases that never get to court. Most of the time, people would rather have their occurrences formally documented than file a lawsuit. For instance, they don't really want to press charges against their husband or live-in partner—instead, their main goal in reporting domestic abuse to the barangay is to record the incident.

Also, there are instances where victims don't fully participate with the offered support services. When their partners mistreat them, they might merely report the abuse to the barangay for documentation's sake; they might not pursue legal action or look for more help. The impact of programs intended to offer assistance and legal remedies may be impeded by this lack of collaboration, which could result in many instances going unresolved and neglected in the court system.

COMPREHENSIVE COUNSELLING SERVICES

It is extremely difficult to address the psychological effects of violence on victims and children; to do so, professional and well-coordinated psychological and therapeutic institutions are needed. Anxiety, depression, and post-traumatic stress disorder are among the severe emotional trauma that victims of violence frequently endure. These conditions can have a long-lasting effect on the victims' general and mental health.

It is crucial to include licensed psychologists and other therapeutic specialists who can offer individualized interventions and continuous assistance in order to effectively support their rehabilitation and guarantee a healthy future. These professionals are able to provide vital therapy and counselling services that are tailored to the particular psychological requirements of survivors, assisting them in their recovery and life reconstruction. In order to have a thorough support system that addresses the psychological repercussions that are both short-term and long-term, coordination between various groups is essential.



CONCLUSION

The results and discussion allowed the researchers to come to a number of important conclusions. Firstly, physical abuse is the most common kind of violence against women and children (VAWC), primarily due to the fact that victims often become financially reliant on their male partners, who have more power over them. This vulnerability is further increased by the fact that a large number of victims are ignorant of the rights and legal protections that are available to them. Second, the Women and Children's Protection Desk is now implementing a number of anti-VAWC programs, including "Talakayan sa Hapagkainan," talks, symposiums, lectures, and barangay visits, all of which are frequently accompanied by the handing out of educational pamphlets. These programs seek to assist and increase community awareness. Yet the primary challenge is the lack of funds necessary to keep these efforts going strong. This budget limitation reduces the overall effectiveness of the VAWC programs, along with the action discontinuing in certain situations and inadequate comprehensive counseling services. The resources available for VAWC efforts are further restricted by the local government's concentration on additional programs and activities, underscoring the necessity for further attention and assistance to solve these pressing problems.

RECOMMENDATION

In order to improve the response to violence against women and children (VAWC), the researchers make a number of recommendations. The Department of Social Welfare and Development (DSWD) and the local government unit should first put in place thorough information-dissemination initiatives to enlighten the public about the legal rights and safeguards that are afforded to women and children. Ensuring victims are informed of their rights and accessible assistance would be facilitated by this. In order to combat VAWC, it is recommended that proactive programs be developed. One such program might involve weekly visits to various barangays to spread knowledge about Republic Act No. 9262 at the Police Station's Women and Children's Protection Desk (WCPD). Third, in order to sustain the continuous operations of the Women and Children's Desk in the city, it is important to obtain financial contributions from non-governmental groups. Fourth, the researchers suggest an action plan that consists of quarterly meetings, livelihood projects, free legal advice, public awareness campaigns, and religious seminars. These programs should be planned with victims' and survivors' rehabilitation and basic needs in mind. It is advised to form partnerships with mental health groups for specialist counseling and create a planned fundraising strategy to guarantee sustainable funding in order to address the issues with counseling services and financial support. Future researchers should make use of this work as a guide when they undertake additional research on VAWC in order to expand on current understanding and improve intervention techniques.

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THE INFLUENCE AWARENESS OF THE RE-ENTRY POLICY ON ACADEMIC PERFORMANCE OF RE-ADMITTED TEENAGE MOTHERS IN KENYA

Murunga Tobister¹, Prof. Kindiki Jonah², Dr. Bomett Emily³

¹PhD Student, Department of Educational Administration and Policy, Moi University School of Education

²Department of Educational Administration and Policy, Moi University School of Education

³Department of Educational Administration and Policy, Moi University School of Education

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ABSTRACT

Teenage pregnancy is a global concern and interventions have been undertaken by governments to return them to school. In Kenya, it is established that over 380,000 school girls between the ages of 12-18 get pregnant annually constituting 18.1%. The purpose of the study, was to analyze whether the awareness of re-entry policy influences the academic performance of teenage mothers in secondary schools in Kenya. The study found out that several issues within awareness may contribute to academic performance of teenage mothers within the re-entry policy that include; a public awareness on teenage mother's re-admission to school and some persons in the society were against the re-admission of teenage mothers back to school. Further, the re-entry policy of teenage mothers had inconsistent guidelines and how schools are to support the teenage mothers. Lastly, many teenage mothers drop out of school due to lack of awareness of the re-entry policy leading to failure of the policy.

KEY WORDS: academic performance, re-entry policy, teenage mothers

INTRODUCTION

Teenage pregnancy and eventual resultant of teenage motherhood is exposed as a challenge to school going girls and children of adolescent mothers had 30 to 40 percent greater odds of failing to complete secondary school (Fall, et al., 2015). With school age going girls getting pregnant, countries developed ways of dealing with the emergence of teenage mothers who are schooling (Engzell, Frey, & Verghagen, 2020). During the Mauritius Forum for African Women Educationists (FAWE) meeting of 1994, it was agreed on the need to permit girls to proceed with learning after getting pregnant (Mbugua, 2013, Loaiza & Liang, 2013). This was, therefore, the birth of the concept of teenage mother in education and world forums such as the one at Jomtien Thailand came up with international commitments and later Millennium Development Goals (MDGs) (Runhare & Vandeyar, Perceptions of Policy duty Bearers on the Inclusive Education Policy for Pregnant Teenagers in South Africa, 2012). According to FAWE, key among the factors influencing the implementation of the Re-entry policy are stakeholders that include Ministry of Education officials, Head teachers, teachers, teacher counselors and parents (FAWE, 2004).

The intricacy of the academic performance starts from its conceptualization as different scholars provide. For some, it is known as school readiness, academic achievement and school performance, but generally the difference in concepts are only

explained by semantics as they are used as synonyms. Conventionally, it has been agreed that academic performance should be used in university populations and school performance in regular and alternative basic education populations (Lamas, 2014). According to Martinez (2007) as cited by Lamas (2014), academic performance is the result of learning, prompted by teaching activity by the teacher and produced by the student. This shows that academic performance is an output of the interaction between the learner and the teacher with specific curriculum to be learned. The learner must be the one expected to show the output upon being examined. The interaction between the learner and the teacher show continuity of learning. Teenage mothers may experience a break in the learning process, thus influencing the end product in terms of grades and the quality of the grades.

OBJECTIVE

The objective of the study will be;

1. To examine the level of awareness of the re-entry policy among teenage mothers and education managers and its influence on academic performance of admitted teenage mothers in secondary schools in selected counties of Kenya

METHODOLOGY

Convergent parallel mixed-methods design was adopted and follows pragmatism as a theoretical assumption and is a well-



organised and accepted approach to mixed methods research (Creswell & Plano Clark, 2018). In a convergent design, the integration of both data will help a researcher gain a whole perspective of the one offered by the quantitative or qualitative results alone. It is an approach in which two data sets are joined to get an inclusive representation of the issue being explored and to validate one set of findings with the other (Creswell and Plano Clark, 2018). In the analysis stage, a researcher can always look for the common ideas across both sets of conclusions.

TARGET POPULATION

The study involved 672 public secondary schools with a girls' enrolment in Trans-Nzoia County, West Pokot, Elgeyo Marakwet and Uasin Gishu. The sample size consisted of 246 students, 37 Principals, 33 directors of studies and 36 guidance and Counselling who were selected using stratified and simple random sampling techniques

GEOGRAPHICAL AREA

This study was conducted in secondary schools across four selected counties: Trans-Nzoia, West Pokot, Elgeyo Marakwet, and Uasin Gishu. These counties are part of the former Rift Valley province in Kenya.

STUDY FINDINGS AND DISCUSSION

The findings from respondents indicated that majority of the students (Mean = 2.573, SD = 1.328, n = 246), Directors of Studies (Mean = 2.455, SD = 1.033, n = 33) and Principals (Mean = 2.583, SD = 1.228, n = 36) agreed that there is public awareness done on teenage mothers re-admission to school. Majority of the guidance and counseling teachers were undecided as indicated by a (Mean = 2.583, SD = 1.228, n = 36). This information indicates that there was a public awareness on teenage mothers re-admission to school as indicated by the students, Director of Studies and Principal. This implies that the society through Ministry of Education, Teachers Service Commission and local administration have sensitized teenage mothers to report back once they have given birth to continue with their studies. It is also critical to mention that schools through the Principals have been implementing this policy as indicated in their response showing that they are aware. It is important however to mention that the Guidance and Counseling teachers were undecided on whether there is public awareness. This may be attributed to the fact that, probably in their (G&C) perception they have a feeling that not much have been done. This concurs with the findings of Wangui (2015) who asserted that raising awareness on the re-entry policy is vital in developing community support for such programmes. This is also contrary to the findings of Omwancha (2012), who while studying the same issue of the re-entry of pregnant in Elgeyo Marakwet found out lack of awareness and many were condemning the school management for the re-admission of teenage mothers. This indicates that with time, the re-entry policy has been articulated by government and many are aware of the same and supported by the study undertaken by Barmao (2020) who stated that the re-entry has been defined clearly and reinforced in schools.

Interview indicated that

As teachers we are aware of the policy at least on paper. On the side of the parent I may say that majority of the parents are aware of the policy and that explains why when they take their daughters many of them say that they will still come back. They cite that "sheria ya serikali" (Government laws) allows them to return their students back.

This finding is similar to Wangui (2015) assertion that, the influence of re-entry policy on re-admitted teenage mothers' academic performance lies on knowledge of the policy by all the stakeholders. The best way to do this is to ensure that the policy is as visible as possible. She asserts that raising awareness is especially important in developing community support for the re-entry policy. However, studies reveal that many stakeholders are not aware of the existence of the policy nor did they fully understand what the policy was all about.

Data presented indicated that it's only the Director of Studies (Mean = 2.515, SD = 1.034, n = 33) who felt that most of the public are not aware of the re-admission of teenage mothers back to school as a policy. Other respondents were undecided as indicated by students (Mean = 2.659, SD = 1.177, n = 246), Guidance and counseling (Mean = 3.054, SD = 1.311, n = 37) and Principal (Mean = 2.75, SD = 1.052, n = 36). It is important to note that contrary to the statement indicating that most of the public are not aware of the policy indeed the opposite is true. This is echoed by Pspise (2017), who stated that in 2014 nearly 200 school principals took part in a policy dialogue meeting convened by the population council collaboration with the Homa Bay Department of Education and it turned out that none of them had ever seen a copy of Kenya's school re-entry policy for girls. A third had not heard the country's national school Healthy policy which let pregnant girls continue with their education. Responses demonstrated that some persons in the society were against the re-admission of teenage mothers back to school. This was indicated by the Director of Studies who agreed to that sentiment as indicated by (Mean = 2.515, SD = 1.004, n = 33). This is critical in explaining the small portion of people who are adherent to customs and traditions and also the different levels of education as previously indicated in the preceding Table.

One of the interview responses (County 102) indicated the following:

There are 2 categories of parents; one, there are parents who are concerned and therefore take action like reporting to relevant authorities. And two, others are never concerned and don't bother the situation of their girls hence just leaving them at home.

Similar findings were made by UNICEF (2011) which pointed that schools deny the teenage mothers an opportunity to continue with their education despite the existence of the guidelines which require them to readmit young mothers to school (UNICEF, 2011). Lack of sensitization among parents can be attributed to lack of awareness of the government re-entry policy of teenage



mothers back to school and this concurs with the findings of Omwancha (2012). In the study of Elgeyo Marakwet, Omwancha (2012) asserted that there is lack of awareness among stakeholders of government policy on re-entry of teen mothers due to failure on the designing and communicating policy.

The findings demonstrated that some teachers were aware of the existence of the re-entry policy of teenage mothers. This is shown by the majority of the students (Mean = 3.533, SD = 1.280, n = 246) and guidance and counseling teachers (Mean = 3.568, SD = 1.385, n = 37) who disagreed to the fact that some teachers are not aware of the existence of the re-entry policy of teenage mothers. Related findings were made by Ncube (2017) who reported that there is inadequate knowledge of national policies of educators, parents and members of the communities they did not know nor had very little knowledge about the guidelines on learner pregnancy management. This means that the intended beneficiaries and implementers are not conversant with the policy thus casting doubt on its proper implementation.

All the four respondents were undecided as to whether teenage mothers were not aware of the re-entry policy. This is indicated by the students responses (Mean = 3.085, SD = 1.224, n = 246), Guidance and counseling (Mean = 3.054, SD = 1.153, n = 37), Director of Studies (Mean = 2.606, SD = 1.116, n = 33) and the Principals (Mean = 3.167, SD = 1.254, n = 36). This could be explained by the fact that the respondents were not the ones who were affected, thus they could not be able to tell specifically the status of awareness, thus supports the work of Omwancha (2012).

Further the findings indicated that majority of the Director of studies felt that the re-entry policy of teenage mothers had inconsistent guidelines. This is demonstrated by Director of studies responses that indicated a (Mean = 2.485, SD = 1.0344, n = 33) and Principals (Mean = 2.556, SD = 1.206, n = 36) who agreed that there may be some inconsistencies to the policy. This finding conforms to Wangui (2015) assertion that for any policy that resulted in new programs, services or operational guidelines it should be circulated and be understood by the people responsible for and using them. Many of the education officials, principals, head teachers and teachers find the current policy guidelines inadequate and confusing in any aspects, they are in a dilemma of how to detect a pregnancy as pregnancy test is not allowed in school because it is unconstitutional and against human rights and the Constitution of Kenya 2010. There are inconsistency practices among the head teachers in relation to re-entry of young mothers to different schools after delivery. They were in dilemma whether to treat them equal to other students. The understanding of the policy is varied and confusing among the MOE officials, principals and teachers and this confusion can allow them either to be positive or negative depending on the situation. It is important the government acknowledges the important role the teachers play and provide them with more professional development and develop specific guidelines to assist pregnant teenagers and teenage mothers.

Respondents agreed that there are no specific guidelines on how schools are to support the teenage mothers. This was demonstrated where students response was (Mean = 2.598, SD = 1.360, n = 246), guidance and counseling teachers (Mean = 2.249, SD = 1.338, n = 37), Director of studies (Mean = 2.121, SD = 0.857, n = 33) and Principals (Mean = 2.178, SD = 1.0344, n = 36). It is critical to mention that specific guidelines such as point in time that the girls should exit and reenter are not very specific. Other aspects as postnatal care are not addressed and even schools may not be in a position to handle. Related literature on Prospects and Challenges in the Implementation of re-entry policy of girls in Kenya, Wanyama and Simatwa (2011) found out that challenges faced by head teachers in the implementation of the re-entry policy are: lack of corresponding guidelines towards its implementation, fear of bad influence of having mothers in their schools and unawareness of the re-entry policy. The re-entry policy therefore remains a bold step towards making sure that teen mothers proceed with their education but other factors which hinders their integration and retention in school leading to several dropout cases among need to be pursued.

Lastly, all respondents agreed that many teenage mothers drop out of school due to lack of awareness of the re-entry policy. Students responses showed (Mean = 2.549, SD = 1.266, n = 246), Guidance and counseling (Mean = 2.541, SD = 1.260, n = 37), Director of studies (Mean = 2.152, SD = 1.064, n = 33) and Principals (Mean = 2.222, SD = 1.186, n = 36). Literature indicates that the lack of awareness leads to practices that shrink the policy space despite how broad and enabling it appear on paper. Barmao (2020) indicated that in Uganda the challenge of girls dropping out of school due to pregnancies has been explained by a mix of socio-cultural views, perceptions and practices surrounding early pregnancies. The study further asserts that in most cultural settings, pre-marital pregnancy among girls is stigmatized both in school and in communities mainly on moralistic grounds without addressing factors that lead to pregnancy among school girls. Many times, school careers of many girls are cut short because of pregnancy either by the girls withdrawing themselves from school or through expulsion with little or no chance of re-entry after delivery. There are gaps on the completion rate of teenage mothers. It is not documented on the number of teenage mothers who go back to complete school or on their academic achieved (Barmao, 2020). This is complemented with lack of information on the existence of the re-entry policy.

RECOMMENDATIONS

Campaigns and sensitization against teenage pregnancies by teachers, parents, religious leaders and government through various ministries especially that in charge of education should start early when the girls join high school to create more awareness of the issue of teenage motherhood in the education sector in Kenya especially Basic Education. Such campaigns be carried out using the available media, educational meetings and any public gathering. This will go a long way in dealing with gender inequality in Basic education and ensuring that the rights



of the girl-child is not denied as a consequence of teenage pregnancy and motherhood.

CONCLUSION

The study found out that several issues within awareness of the re-entry policy may contribute to academic performance of teenage mothers that include; a public awareness on teenage mother's re-admission to school and some persons in the society who are against the re-admission of teenage mothers back to school. Further, the re-entry policy of teenage mothers had inconsistent guidelines and lack modalities of how schools are to support the teenage mothers upon re-admission back to school for learning. Lastly, many teenage mothers drop out of school due to lack of awareness of the re-entry policy leading to failure of the policy and make it difficult to ascertain the level of academic performance of the re-admitted teenage mother.

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AUDIO-GRAPIYA NA KAGAMITAN SA PAGKATUTO NG ORTOGRAPIYANG FILIPINO PAGSULAT NG REFLECTIVE JOURNAL SA LOHIKAL NA PAGGANAP NG MGA MAG-AARAL

Maribeth Quisteriano Panggat

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pag-aaral na ito ay nakapokus sa paggamit ng audio-grapiya na kagamitan sa pagkatuto ng ortograpiyang Filipino at pagsulat ng reflective journal sa pagganap ng mga mag-aaral. Layunin ng pag-aaral na ito na malaman ang mga kaugnayan na baryabol sa pag-aaral sa araling Filipino. Sinikap ng mananaliksik mabigayan ng katugunan sa layuning nakapaloob sa pag-aaral. Ito ay ang mga sumusunod; Ang antas ng paggamit ng audio-grapiya na kagamitan sa pagkatuto, ang antas ng mga tagasagot sa pagsulat ng reflective journal, ang lebel ng lohikal ng pagganap ng mga mag-aaral sa paglalahad. Malaman ang makabuluhang kaugnayan ng paggamit ng audio-grapiya sa lohikal na paglalahad na pagganap ng mga mag-aaral at pagsulat ng reflektib journal.

Ang palarawang pananaliksik na disenyo ang ginamit mananaliksik sa pag-aaral na ito ay mga kaganapan sa pag-aaral ay kinapapalooban ng pagtatala, paglalarawan, pagpapakahulugan, pagsusuri at paghahambing. Layunin ng ganitong disenyo na sistematikong mailarawan ang situwasyon at kundisyon nang makatotohanan at buong katiyakan. Ang nagsilbing tagatugon sa pananaliksik na ito ay mga mag-aaral nasa grade eleven (11) na may isang daan at dalawampu (120) tagatugon mula sa Laguna University Senior High School Panuruang taon 2023-2024. Sa pagsasagawa ng pananaliksik na ito, ang mananaliksik ay gumamit ng "Random Sampling"

Sa ginawang pag-aaral lumabas sa resulta ang antas paggamit ng audio-grapiya ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Nagpapakita lamang ito ang audio-grapiya poetry ay nakatulong sa pagsulat ng reflective journal ng mga mag-aaral. Gayundin sa resulta ng ang antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal ay may literal na paliwanag na lubhang mataas. Ang resulta naman sa pagganap ng mga mag-aaral sa wikang Filipino batay sa lohikal na paglalahad ay may mapaglarawang katumbas na Higit na Mahusay at may literal na paliwanag na Kasiya-siya. Makikita sa resulta na nakakuha ng mataas na marka sa pagsulat ang mag-aaral matapos maisagawa ang pag-aaral.

Ang ang panghuling resulta ay lumabas ang "May makabuluhang kaugnayan ng paggamit ng Audio-grapiya na kagamitan sa pagkatuto ng Ortograpiyang Filipino at Pagsulat ng Reflective Journal sa pagganap ng mga mag-aaral", ipinapakita nito ang kaugnayan sa pagitan nila. Nagpapatunay lamang ito na nagkaroon ng epekto ang paggamit ng audio grapiya sa pagsulat ng mga mag-aaral.

Hango sa kinalabasan at konklusyon ng pag-aaral, iminumungkahi ng mananaliksik ang mga sumusunod ng rekomendasyon. Gamitin ang audio- grapiya bilang kagamitang panturo upang makatulong sa mga mag-aaral sa pagsulat ng reflektib jornal.

KEYWORDS: audio-grapiya; kagamitan sa pagkatuto; ortograpiyang Filipino

1. PANIMULA

Napakahalaga ng mga kagamitang panturo na nalilikha at nagagamit ng guro sa kanyang pag-aaral. Ang mga kagamitang ito ay makatutulong sa mabilis na pag-unawa ng mga mag-aaral sa bawat aralin. Hindi na bago sa mag-aaral na patuloy na maghanap ng bago o kakaibang karanasan sa loob ng silid aralan, habang sila ay natututo nais nila na magkaroon ng kakaibang mukha ng pagtuturo na makukuha ang interes nila sa pakikinig sapagkat hindi na sapat na tsok at pisara lamang ang gamit ng guro sa paghahatid ng impormasyon sa kanilang mag-aaral. Nararapat na mahasa ang kasanayan nila sa iba't ibang aspeto.

Banggit nina Badayos (2016), isa sa mga kasanayang pangkomunikatibo na dapat taglayin ng isang mag-aaral ay ang kakayahang maghanap ng wastong babasahin na may komprehensyon sa binabasang teksto, kailangan ang pag-unawa sa anumang binasa. Ang mga mag-aaral ay kailangang makadebelo ng mga kasanayan na makatutulong na mapanatili at maunawaan ang mga istruktura sa paggamit ng wika. At maiaplay nila sa pasulat na kasanayan. Hindi lamang nila

nabasa ang teksto bagkus nailalapat din nila ang mga natutuhan sa pamamagitan ng pagsulat.

Ortograpiya ang paraan ng pagbibigay-simbolo sa wikang pasalita sa paraang pasulat. Sa simpleng salita, ito ang paraan ng pagbaybay, ispelang na ginagamit sa isang wika. Ito ay nakatutulong sa mga mag-aaral upang magkaroon ng maayos na ugnayan.

Bawat wika ay may sariling sistema ng paglalahap ng simbolo/letra/titik/karakter sa mga makahulugang tunog o ponema (Fortunato, 2019).

Sa pagtuturo ng guro ng ortograpiyang Filipino tila ba ang ilan ay nagkakaroon pa rin ng kalituhan sa paggamit at pag-unawa ng mga salita pasalita man ito o pasulat. Maaring nababasa nila ang ilan mga alituntunin at patakaran ngunit nagkakaroon pa rin ng kalituhan lalo na sa pasalita at pagbigkas ng mga salita kagaya na lamang paggamit ng mga bantas, pagbabaybay at higit ang paggamit ng tuldik.



Ang gabay sa ortograpiya ng wikang Filipino ay binubuo ng mga tuntunin kung paano sumulat gamit ang wikang Filipino. Hinango ang mga tuntunin sa mga umiiral na kalakaran sa paggamit ng Wikang Pambansa, bukod sa napagkasunduang mga tuntunin, bunga ng mga forum at konsultasyon, hinggil sa mga kontrobersiyal na usapin sa ispelang. Ninanais palaganapin sa gabay na ito ang estandardisadong mga grapema o pasulat na mga simbolo at ang mga tuntunin sa paggamit at pagbigkas ng mga simbolong ito. Itinatanghal din dito ang mga naganap na pagbabago mula sa panahon ng abakadang Tagalog bunga ng bagong alpabeto at bunga na rin ng umuunlad na paggamit sa Wikang Pambansa (Almario, 2013).

Kaya naman layunin ng mananaliksik na matulungan ang mag-aaral sa mga suliraning ito at ang binuong kagamitan gaya ng audio-grapiya ay makakatutulong sa kanila upang mahasa ang kanilang kasanayan hindi lamang sa pakikinig kundi pa rin sa pagsulat ng iba't ibang sulatin. Malaki ang maitutulong ng pag-aaral na ito lalo't higit sa kanilang araw-araw.

1.1 Paglalahad ng Suliranin

Ang pag-aaral na ito ay nagnanais na alamin ang mga sumusunod na katanungan:

1. Ano ang antas ng paggamit ng audio-grapiya na kagamitan sa pagkatuto batay sa;
 - 1.1 organisasyon;
 - 1.2 pagsasalita;
 - 1.3 kaangkupan, at
 - 1.4 tunog?
2. Ano ang antas ng ortograpiyang Filipino sa pagsulat ng reflective journal batay sa:
 - 2.1 tema;
 - 2.2 nilalaman, at
 - 2.3 mekanismo?
3. Ano ang lebel ng lohikal na pagganap ng mga mag-aaral sa paglalahad?
4. May makabuluhang kaugnayan ba ang paggamit ng Audio-grapiya na kagamitan sa pagkatuto sa pagsulat ng reflektib journal sa lohikal na pagganap ng mga mag-aaral?
5. May makabuluhang kaugnayan ba ang Ortograpiyang Filipino sa Pagsulat ng reflektib journal sa lohikal na paglalahad ng mga mag-aaral?
6. Anong planong gawain ang nais imungkahi batay sa resulta ng pagsusuri?

2. METODOLOHIYA NG PANANALIKSIK

Ang disenyong ginamit mananaliksik sa pag-aaral na ito ay mga kaganapan sa pag-aaral ay kinapapalooban ng pagtatala, paglalarawan, pagpapakahulugan, pagsusuri at paghahambing.

Talahanayan 1 Antas ng Paggamit sa Audio-grapiya batay sa Organisasyon

Mga Pahayag	Mean	SD	Puna
<i>Nailahad ang paksa sa paraang lohikal.</i>	4.85	0.39	Lubos na sumasang-ayon
<i>Nakapagbibigay ng sapat na detalye.</i>	4.66	0.52	Lubos na sumasang-ayon
<i>Nuaunawan ng mabilis ang mga salitang ginamit.</i>	4.63	0.56	Lubos na sumasang-ayon
<i>Naihanayan ng wasto ang mga impormasyon.</i>	4.59	0.51	Lubos na sumasang-ayon
<i>Nakapagsusulat ng pormal at hindi maligoy.</i>	4.48	0.59	Lubos na sumasang-ayon

Overall Mean: 4.64

Standard Deviation: 0.18

Literal na Paliwanag: Lubhang Mataas

Layunin ng ganitong disenyo na sistematikong mailarawan ang sitwasyon at kundisyon nang makatotohanan at buong katiyakan.

Ayon kay Akram, S. (2013), "Ito ay isang imbestigasyon na naglalarawan at nagbibigay-kahulugan tungkol sa isang bagay o paksa. Ito'y may kinalaman sa mga kondisyon ng mga ugnayang nagaganap, mga epektong nararamdaman o mga kalakarang nilinang".

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay naglalaman ng presentasyon, analisis at interpretasyon na tumatalakay sa paglalahad sa mga nakalap na datos. Ito ay binigyan ng kaukulang presentasyon, analisis at interpretasyong pagpapakahulugan sa pamamagitan ng mga talahanayan upang mabigyang kasagutan ang mga inilahad na suliranin sa pag-aaral na ito. Ang bawat impormasyong nakuha ay inilahad nang maayos sa mga talahanayan.

Ang mga datos na nakalahad sa kabanatang ito ay batay sa pagkakasunod-sunod ng pagblalahad ng suliranin. Ipapakita rin ang mga istatistikal na pamamaraan sa mga talahanayan na sumagot sa pananaliksik na Audio-grapiya na kagamitan sa pampagkatuto sa Filipino at kakayahan sa proseso ng pagsulat sa pagganap ng mga mag-aaral.

Antas ng paggamit ng audio-grapiya na kagamitan sa pagkatuto ng mga mag-aaral.

Sa pananaliksik na ito, sinuri ang nilalaman ng kagamitang Audio-grapiya at kung paanong makatutulong ang mga bahagi nito sa proseso ng pagsulat. Patungkol ito sa ortograpiya o pagbabaybay ng mga salita, pasulat o pasalita na pamamaraan man.

Upang malaman ang antas ng ortograpiyang Filipino sa pagsulat ng reflektib journal. Binigyang interpretasyon ang mga datos na galing sa respondante gamit ang Weighted Mean, Standard Deviation, at Literal na Paliwanag o Puna naglalaman ito ng mga resulta ng mga tagatugon sa ginawang pag-aaral ng mananaliksik.

Sa ibaba ay makikita ang antas paggamit ng audio-grapiya batay sa organisasyon, ito kinapapalooban ng pahayag, mean, standard deviation at puna.



Ang talahanayan 1 ay nagpapaliwanag ng antas paggamit ng audio-grapiya batay sa Organisasyon ang unang pahayag na nagsasaad ng nailalahad ang paksa sa paraang lohikal, ang pinakamataas ang nakuhang resulta na may $M=4.85$ at $SD=0.39$ at may literal na paliwanag na lubhang mataas na antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may puna na lubos na sumasang-ayon.

Ang ikalawang pahayag naman na nakapagbibigay ng sapat na detalye, ay may $M=4.66$ at $SD=0.52$ ay may literal na paliwanag na lubhang mataas na antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may puna na lubos na sumasang-ayon.

Ang ikatlong pahayag na *naunawan ng mabilis ang mga salitang ginamit*, ay may $M=4.63$ at $SD=0.56$ ay may literal na paliwanag na *lubhang mataas* na antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Ang ikaapat pahayag na *naihanayan ng wasto ang mga impormasyon*, ay may $M=4.59$ at $SD=0.51$ ay may literal na paliwanag na *lubhang mataas* na antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Napansin na lubhang mataas ang antas ng paggamit ng audio-grapiya batay sa organisasyon. Ang pahayag na may pinakamababang marka ay ang "nakapagsusulat ng pormal at hindi maligoy," na mayroong $M=4.48$, $SD=0.59$, na may puna ng lubos na pagsang-ayon. May kabuoang mean na 4.64 at standard deviation na 0.18, ipinapakita na ang antas ng paggamit ng audio-grapiya batay sa Organisasyon ay may puna na *lubos na sumasang-ayon* at literal na paliwanag na *lubhang mataas*.

Laman ng talahanayan 1 ang Antas ng Audio-grapiya batay sa organisasyon, nagpapakita ang antas na ito bilang kagamitang pampagkatuto sa Filipino, ayon sa layunin ng pag-aaral ay may literal na paliwanag na lubhang mataas. Nangangahulugan lamang ito na may lubos na katanggap-tanggap itong layunin na siyanhg nagging mapa ng binuong kagamitan. Kaya naman batay sa mga resultang nakalap ng mananaliksik sa mga naging tagatugon sa isinagawang pag-aaral ay marapat na gamitin lamang ang kagamitang ito, sa pagkatuto ng mga mag-aaral ng ortograpiya. Sa kabuoan ang resulta ay naging maayos na tanggapin.

Sa ibaba ay makikita ang antas paggamit ng audio-grapiya batay sa pagsasalita, ito kinapapalooban ng pahayag, mean, standard deviation at puna.

Talahanayan 2 Antas ng Paggamit sa Audio-grapiya batay sa Pagsasalita

Mga Pahayag	Mean	SD	Puna
<i>Nakasusunod ng malaya sa instruksyon ng aralin.</i>	4.71	0.48	Lubos na sumasang-ayon
<i>Naiuugnay ang dati nang kaalaman sa panibagong impormasyon.</i>	4.70	0.52	Lubos na sumasang-ayon
<i>Naaayon ang boses na ginamit sa audio.</i>	4.62	0.53	Lubos na sumasang-ayon
<i>Nadirinig ng malakas ang tinig ng nagsasalita sa audio.</i>	4.42	0.54	Lubos na sumasang-ayon
<i>Nakapagbibigay ng tamang bigkas at baybay sa pagsasalita</i>	4.35	0.58	Lubos na sumasang-ayon

Overall Mean: 4.56

Standard Deviation: 0.29

Literal na Paliwanag: Lubhang Mataas

Ang talahanayan 2 ay nagpapaliwanag ng Antas paggamit ng audio-grapiya batay sa Pagsasalita na nasa unang pahayag na *nakasusunod ng malaya sa instruksyon ng aralin* ang nakakuha ng pinakamataas na resulta $M=4.71$ at $SD=0.48$ na may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Ang pahayag na *naiuugnay ang dati nang kaalaman sa panibagong impormasyon* ay nakakuha ng $M=4.70$ at $SD=0.52$ ay may literal na paliwanag na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Ang ikatlong pahayag na *naayon ang boses na ginamit sa audio* ay nakakuha ng $M=4.62$ at $SD=0.53$ ay may literal na paliwanag na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Nasa ikaapat na pahayag naman ang *nadirinig ng malakas ang tinig ng nagsasalita sa audio* ay nakakuha ng $M=4.42$ at

$SD=0.54$ ay may literal na paliwanag na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Napansin na lubhang mataas na antas paggamit ng audio-grapiya batay sa pagsasalita. Ang pahayag na may pinakamababang marka ay ang *nakapagbibigay ng tamang bigkas at baybay sa pagsasalita*, na mayroong $M = 4.35$, $SD = 0.58$, at may puna namang lubos na sumasang-ayon.

May kabuoang mean na 4.56, standard deviation na 0.29 at ipinapakita na ang antas ng kasanayan ng mga tagasagot sa antas paggamit sa audio-grapiya batay sa Pagsasalita ay may puna na lubos na *sumasang-ayon* at literal na paliwanag na *lubhang mataas*.

Ang simpleng panonood ng youtube, tiktok at maging sa telebisyon at pagbrowsed sa internet sa mga social media ay madali na nilang nagagaya at tinatangagap kahit pa ang ilan ay may kamalian na sa wikang Filipino lalo na kung trending na. Sa media rin nagagawa nilang makabuo ng mga bagong salita



upang mapadali ang kanilang pakikipagtalastasan sa kanilang mga kaibigan o kapwa. Ayon sa layunin ng pag-aaral ito may literal na paliwanag na lubhang mataas, na siyang naging mapa ng binuong kagamitan.

Laman ng talahanayan tatlo ang antas paggamit ng audio-grapiya batay sa kaangkupan, ito kinapapalooban ng pahayag, mean, standard deviation at puna.

Talahanayan 3 Antas ng Paggamit sa Audio-grapiya 21Abatay sa Kaangkupan

Mga Pahayag	Mean	SD	Puna
<i>Naiiangkop ang materyal na ginamit sa pagtalakay ng aralin.</i>	4.79	0.41	Lubos na sumasang-ayon
<i>Napagyayabong ang kasanayan sa pagsulat.</i>	4.76	0.47	Lubos na sumasang-ayon
<i>Napauunlad ang kakayahan sa malayang pagkatuto.</i>	4.62	0.56	Lubos na sumasang-ayon
<i>Nakabubuo ng repleksyon na nakabatay sa aralin.</i>	4.58	0.55	Lubos na sumasang-ayon
<i>Nakabatay ang pagtalakay ng aralin</i>	4.54	0.56	Lubos na sumasang-ayon

Overall Mean: 4.66

Standard Deviation: 0.21

Literal na Paliwanag: Lubhang Mataas

Ang talahanayan 3 ay nagpapaliwang ng antas paggamit sa audio-grapiya batay sa Kaangkupan, nasa unang pahayag na *naiiangkop ang materyal na ginamit sa pagtalakay ng aralin* ang nakakuha ng pinakamataas na resulta na may $M=4.79$ at $SD=0.41$ na may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at punang *lubos na sumasang-ayon*.

at punang *lubos na sumasang-ayon*.

Ang ikalawang pahayag na *nagsasaad ng napagyayabong ang kasanayan sa pagsulat* ay may $M=4.76$ at $SD=0.47$ ay may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at punang *lubos na sumasang-ayon*. Nagpakita lamang ang pahayag bilang dalawa na ito ay nakakuha ng ikalawa sa pinakamataas na resulta batay sa nasabing pahayag.

Napansin na may pinakamababang marka ang pagtalakay ng aralin, na may $M = 4.54$ at $SD = 0.56$. Literal na paliwanag ang *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal, pati na rin sa pananaw ng mga tagatugon at punang *lubos na sumasang-ayon*.

Ang pahayag na *napauunlad ang kakayahan sa malayang pagkatuto* ay may $M=4.62$ at $SD=0.56$ ay may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at punang *lubos na sumasang-ayon*.

May kabuoang mean na 4.66, standard deviation na 0.21 at ipinapakita na ang antas ng kasanayan ng mga tagasagot sa antas paggamit sa audio-grapiya batay sa Kaangkupan ay may puna na *lubos na sumasang-ayon* at literal na paliwanag na *lubhang mataas*.

Nasa pahayag na *nakabubuo ng repleksyon na nakabatay sa aralin* ay may $M=4.58$ at $SD=0.55$ ay may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon

Tunay na epektibo at kagalak-galak ang naging resulta ng mga pahayag sa itaas dahil sa kinalabasan ng pag-aaral. Kaya naman ang layunin ng pag-aaral batay resulta sa pahayag sa talahanayan sa bilang tatlo ay nangangahulugang may *lubos na katanggap-tanggap* ang layunin na siyang naging mapa ng binuong kagamitan sap ag-aaral na isinagawa ng mananaliksik. Naging tagumpay ang pangangalap ng datos sa tulong ng mga tagatugon.

Sa ibaba ay makikita ang antas paggamit ng audio-grapiya batay sa tunog, ito kinapapalooban ng pahayag, mean, standard deviation at puna.

Talahanayan 4 Antas ng paggamit sa Audio-grapiya batay sa Tunog

Mga Pahayag	Mean	SD	Puna
<i>Nagpapakita ng kawilihan ang mga tunog na ginamit.</i>	4.87	0.34	Lubos na sumasang-ayon
<i>Naiyaayon ang tunog sa boses at aralin na tinalakay.</i>	4.80	0.45	Lubos na sumasang-ayon
<i>Nagagamit ng tama ang lakas at balanse ang tunog.</i>	4.72	0.49	Lubos na sumasang-ayon
<i>Nababatid ang akda dahil sa settings ng tunog na ginamit.</i>	4.65	0.54	Lubos na sumasang-ayon
<i>Nakalilikha ng kakaibang tunog ang ginamit na materyal sa pagtatalakay sa paksa.</i>	4.52	0.58	Lubos na sumasang-ayon

Overall Mean: 4.71

Standard Deviation: 0.24

Literal na Paliwanag: Lubhang Mataas



Ang talahanayan 4 ay nagpapaliwang ng antas paggamit sa audio-grapiya batay sa Tunog, ang naunang pahayag na nagpapakita ng kawilihan ang mga tunog na ginamit ay nakakuha ng pinakamataas na resulta na may $M=4.87$ at $SD=0.34$ at may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Ang pahayag naman na nagsasaad ng *naiiaayon ang tunog sa boses at aralin sa tinalakay* ay may $M=4.80$ at $SD=0.45$ at may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Ang pahayag naman na *nagagamit ng tama ang lakas at balanse ang tunog* ay may $M=4.72$ at $SD=0.49$ na may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Nababatid ang akda dahil sa settings ng tunog na ginamit ay ang pahayag na ikaapat, nakakuha naman ito ng $M=4.65$ at $SD=0.54$ may literal na paliwang na *lubhang mataas* na antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal at sa pananaw ng mga tagatugon at may puna na *lubos na sumasang-ayon*.

Napansin na *lubhang mataas* ang antas ng paggamit sa audio-grapiya. Ang pahayag na may pinakamababang marka ay ang nakalilikha ng kakaibang tunog gamit ang materyal sa pagtatalakay sa paksa, may $M = 4.52$ at $SD = 0.58$, na may

punang lubos na sumasang-ayon. Kaya naman ang puna sa talahanayan ay nagpapakita lamang ng *lubhang mataas*.

May kabuoang mean na 4.71, standard deviation na 0.24 at ipinapakita na ang antas ng kasanayan ng mga tagasagot sa antas paggamit sa audio-grapiya batay sa tunog ay may puna na *lubos na sumasang-ayon* at literal na paliwanag na *lubhang mataas*.

Ito ang lahat ng mga detalye na kailangan ng iyong isip upang lumikha ng isang buong larawan o imahe. Mahalaga ang maayos na tunog kapag nakikinig sa anumang uri ng kasangkapan, dapat ay hindi masakit sa tenga o kaya naman ay malinaw na uunawan ang sinsabi ng nagsasalita sa pamamagitan ng paggamit ng maayos na tunog. Kaya naman ang kinalabasan ng pag-aaral ay *lubhang mataas*, patunay lamang na ang isinagawang pag-aaral ng mananaliksik ay naging tagumpay at ang kagamitan sa pagtuturo na ginamit na tinatawag na audio-grapiya ay naging epektibo.

Nangangahulugan lamang na may *lubos na katanggap-tanggap* itong layunin na siyang naging mapa ng binuong kagamitan sapag-aaral na isinagawa ng mananaliksik.

Sa kabilang pahina ay makikita ang antas ortograpiyang Filipino sa paglalahad ng mga mag-aaral gamit ang reflektib journal na kanilang nilikha, ito kinapapalooban pa rin ng mga pahayag, mean, standard deviation at puna. Ang talahanayan na ito ay magpapatunay na may *mataas at magandang resulta* ang ginawang pag-aaral ng mananaliksik, sa tulong ng mga tagatugon ay naisakatuparan ito.

Talahanayan 5 Antas ng Kasanayan ng mga Tagasagot sa Pagsulat ng Reflective Journal batay sa Nilalaman

Mga Pahayag	Mean	SD	Puna
<i>Nabubukasan ang isipan sa pagbabagong naganap sa proseso ng pagkatuto.</i>	4.61	0.49	Lubos na sumasang-ayon
<i>Nakapagbibigay ng maayos na konsepto ng paksa.</i>	4.60	0.64	Lubos na sumasang-ayon
<i>Nailalahad nang malinaw ang mga detalye ng paksa.</i>	4.59	0.60	Lubos na sumasang-ayon
<i>Nakapagbibigay ng maliwanag na impormasyon.</i>	4.43	0.61	Lubos na sumasang-ayon
<i>Nalilintang ang kritikal na pag-iisip sa pagsulat.</i>	4.40	0.64	Lubos na sumasang-ayon

Overall Mean: 4.52

Standard Deviation: 0.24

Literal na Paliwanag: Lubhang Mataas

Ang talahanayan 5 ay nagpapakita ng antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal batay sa Nilalaman na naglalaman ng pahayag na *nabububksan ang isipan sa pagbabagong naganap sa proseso ng pagkatuto* ay $M=4.61$ at $SD=0.49$ ito ang nakakuha ng pinakamataas na resulta na may literal na paliwanag na *lubhang mataas sa* antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon may puna namang *lubos na sumasang-ayon*.

Ang pahayag na *nakapagbibigay ng maayos na konsepto ng paksa* ay may $M=4.60$ at $SD=0.64$ na may literal na paliwanag na *lubhang mataas sa* antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon may puna namang *lubos na sumasang-ayon*.

Ang pahayag na *nailalahad nang malinaw ang mga detalye ng paksa* ay may $M=4.59$ at $SD=0.60$ na may literal na paliwanag na *lubhang mataas sa* antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon may puna namang *lubos na sumasang-ayon*.

Ang pahayag na *nakapagbibigay ng maliwanag na impormasyon* ay may $M=4.43$ at $SD=0.61$ na may literal na paliwanag na *lubhang mataas sa* antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon may puna namang *lubos na sumasang-ayon*.

Napansin na ang pahayag na may pinakamababang marka ay ang nalilintang ang kritikal na pag-iisip sa pagsulat, na may $M = 4.43$ at $SD = 0.64$, may literal na paliwanag na *lubhang*



mataas sa antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon, may puna namang lubos na sumasang-ayon.

May kabuoang mean na 4.52, standard deviation na 0.24 at ipinapakita na ang antas ng paggamit ng audio-grapiya batay sa Nilalaman ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang pumukaw ng malawak na interes ay ang mungkahi na mayroong kaalaman sa nilalaman na natatangi sa pagtuturo. Isang uri ng paksa na bagay at tiyak na kaalaman. Ang puna na lumabas sap ag-aaral ay katanggap-tanggap sapagkat

nagpapakita lamang ito na ang antas ng paggamit ng audio-grapiya batay sa nilalaman ay naging maayos sapagkat nagpakita ito ng magandang resulta.

Sa ibaba ay makikita ang antas ortograpiyang Filipino sa paglalahad ng mga mag-aaral gamit ang reflektib journal na kanilang nilikha, ito kinapapalooban pa rin ng mga pahayag, mean, standard deviation at puna. Ang talahanayan na ito ay magpapatunay na may mataas at magandang resulta ang ginawang pag-aaral ng mananaliksik, sa tulong ng mga tagatugon ay naisakatuparan ito.

Talahanayan 6 Antas ng Kasanayan ng mga tagasagot sa Pagsulat ng Reflective Journal batay sa Tema

Mga Pahayag	Mean	SD	Puna
<i>Napapanahon ang temang ginamit.</i>	4.81	0.39	Lubos na sumasang-ayon
<i>Nakakabuo ng maayos na nilalaman batay sa tema.</i>	4.65	0.56	Lubos na sumasang-ayon
<i>Nagpapakita ng interes ang pagbuo ng tema.</i>	4.53	0.63	Lubos na sumasang-ayon
<i>Naiiangkop ang ginamit na tema sa pagsulat.</i>	4.42	0.64	Lubos na sumasang-ayon
<i>Napagtutug-tugma ang daloy ng tema sa paksang isinulat.</i>	4.31	0.54	Lubos na sumasang-ayon

Overall Mean: 4.55

Standard Deviation: 0.29

Literal na Paliwanag: Lubhang Mataas

Ang talahanayang 6 ay nagpapakita ng antas ng kasanayan ng mga tagasagot sa pagsulat ng reflective journal batay sa Tema na may pahayag na *napapanahon ang temang ginamit* ay kapansin-pansin na pinakamataas ang nakuhang resluta na may $M=81$ at $SD=0.39$ na may literal na paliwanag na *lubhang mataas sa antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may punang lubos na sumasang-ayon.*

Ang pahayag na nagsasaad na *nakabubuo ng maayos na nilalaman batay sa tema* ay nakakuha ng $M=4.65$ at $SD=0.56$ na may literal na paliwanag na *lubhang mataas sa antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may punang lubos na sumasang-ayon.*

Ang pahayag na *nagpapakita ng interes ang pagbuo ng tema* ay nakakuha ng $M=4.53$ at $SD=0.63$ na may literal na paliwanag na *lubhang mataas sa antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may punang lubos na sumasang-ayon.*

Ang pahayag na nagsasaad na *naiiangkop ang ginamit na tema sa pagsulat* ay nakakuha ng $M=4.42$ at $SD=0.64$ na may literal na paliwanag na *lubhang mataas sa antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon at may punang lubos na sumasang-ayon.*

Napansin na *lubhang mataas* na antas ng paggamit ng audio-grapiya, ang pahayag na may pinakamababang marka ay ang *napagtutug-tugma ang daloy ng tema sa paksang isinulat* at mayroong $M = 4.31$ at $SD = 0.54$ may punang *lubos na sumasang-ayon.*

May kabuoang mean na 4.55, standard deviation na 0.29 at ipinapakita na ang antas ng paggamit ng audio-grapiya batay sa Tema ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang tema ay maaaring humasa sa kaisipan ng manunulat kung paano niya ilalahad ng maganda ang kanyang mga pananaw hinggil sa isang paksa. Ang tema ay may malaking tulong upang masukat ang kaalamang taglay ng isang manunulat, kaya naman dapat ay makapagbigay ng isang maganda at makabuluhang tema sa pagpapasulat ng sulatin. Ang kinalabasan na resulta ng pag-aaral batay sa antas ng paggamit ng audio-grapiya sa tema ay nagpakita ng lubhang-mataas.

Sa ibaba ay makikita ang antas ortograpiyang Filipino sa paglalahad ng mga mag-aaral gamit ang reflektib journal na kanilang nilikha, ito kinapapalooban pa rin ng mga pahayag, mean, standard deviation at puna. Ang talahanayan na ito ay magpapatunay na may mataas at magandang resulta ang ginawang pag-aaral ng mananaliksik, sa tulong ng mga tagatugon ay naisakatuparan ito.



Talahanayan 7 Antas ng Kasanayan ng mga Tagasagot sa Pagsulat ng Reflective Journal batay sa Mekanismo

Mga Pahayag	Mean	SD	Puna
<i>Nauunawan ang mga alituntunin sa pagsulat ng repleksyon.</i>	4.68	0.55	Lubos na sumasang-ayon
<i>Nababatid ang kahulugan ng mga salitang ginawa sa akda</i>	4.63	0.51	Lubos na sumasang-ayon
<i>Nakasusunod sa pamantayan ng pagsulat.</i>	4.61	0.49	Lubos na sumasang-ayon
<i>Nakasusunod sa tamang baybay ng salita.</i>	4.55	0.59	Lubos na sumasang-ayon
<i>Nagagamit ang tamang bantas sa pagsulat.</i>	4.41	0.60	Lubos na sumasang-ayon

Overall Mean: 4.58

Standard Deviation: 0.27

Literal na Paliwanag: Lubhang Mataas

Ang talahanayan 7 ay nagpapakita ng antas paggamit sa audio-grapiya batay sa Mekanismo na may literal na paliwang na *lubhang mataas* sa antas ng paggamit ng audio-grapiya at sa pananaw ng mga tagatugon ay ang pahayag na *nauunawan ang mga alituntunin sa pagsulat ng repleksyon* ay nakakuha ng $M=4.68$ at $SD=0.55$ ay may punang *lubos na sumasang-ayon* ang unang pahayag na ito ang nakakuha ng pinakamataas na kinalabasan.

Ang pahayag na naglalaman ng *nababatid ang kahulugan ng mga salitang ginawa sa akda* ay may $M=4.63$ at $SD=0.51$ na may literal na paliwanag na *lubhang mataas* sa antas ng paggamit ng audio-grapiya at pananaw sa tagatugon ay may punang *lubos na sumasang-ayon*.

Ang pahayag na naglalaman ng *nakasusunod sa pamantayan ng pagsulat* ay may $M=4.61$ at $SD=0.49$ na may literal na paliwanag na *lubhang mataas* sa antas ng paggamit ng audio-grapiya at pananaw sa tagatugon ay may punang *lubos na sumasang-ayon*.

Ang pahayag na naglalaman ng *nakasusunod sa tamang baybay ng salita* ay may $M=4.55$ at $SD=0.59$ na may literal na

paliwanag na *lubhang mataas* sa antas ng paggamit ng audio-grapiya at pananaw sa tagatugon ay may punang *lubos na sumasang-ayon*.

Napansin na *lubhang mataas* na antas ng paggamit ng audio-grapiya, ang pahayag na may pinakamababang marka ay ang *nagagamit ang tamang bantas sa pagsulat* at mayroong $M=4.41$ at $SD=0.60$ may puna naman itong *lubos na sumasang-ayon*. May kabuoang mean na 4.58, standard deviation na 0.27 at ipinapakita na ang antas ng paggamit ng audio-grapiya batay sa Mekanismo ay may puna na *lubos na sumasang-ayon* at literal na paliwanag na *lubhang mataas*.

Antas ng Lohikal na Pagganap ng mga Mag-aaral batay sa Paglalahad Replektibong Sanaysay

Nilalaman ng pananaliksik na ito ang Antas ng Pagganap ng mga Estudyante ukol sa Pagsulat ng Replektibong Sanaysay. Ito ay isang pamamaraan ng pagpapaksa at analisi ng mga personal na karanasan, opinyon, at damdamin. Isa sa hakbang na maaaring sundan sa pagsulat ng isang replektibong sanaysay ay ang pagsasaayos ng mga datos upang hindi malito ang taong magbabasa nito.

Talahanayan 8 Resulta ng Pagganap ng mga Mag-aaral sa Wikang Filipino batay sa Lohikal na Paglalahad

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
43 – 50	22	18.33	Pinakamahusay
35 – 42	59	49.17	Higit na Mahusay
27 – 34	38	31.67	Mahusay
19 – 26	1	0.80	Katamtamang Husay
10 – 18	0	0.00	Karaniwan
0 – 9	0	0.00	Di mahusay
Total	120	100	
Weighted Mean	37.56		
Pinakamababang Marka	25		
Pinakamataas na marka	47		Kasiya-siya
Standard Deviation	5.50		

Talahanayan bilang walo ay nagpapakita ng resulta ng pagganap ng mga mag-aaral sa Wikang Filipino, sa kabuoang isang daan at dalawampu na tagatugon, ang marka na “35 - 42” ay nakakuha ng pinakamataas na bilang na dalawampu at limapu at siyam (59) o 49.17% ng kabuoang tumugon at may mapaglarawang katumbas na Higit na Mahusay At ang marka na “27 - 34” ay mayroong bilang na tatlumpu at walo (38) o 31.67% ng kabuoang tumugon at may mapaglarawang katumbas na Mahusay. Habang ang marka na “19 - 26” ay

nakakuha ng pinakamababang bilang na isa (1) o 0.80% ng kabuoang tumugon at may mapaglarawang katumbas na Katamtamang Husay.

May kabuoang (*Weighted Mean* = 37.56, *SD* = 5.50) at (*pinakamababang marka* = 25, *pinakamataas na marka* = 47) ipinapakita na ang resulta ng pagganap ng mga mag-aaral sa Wikang Filipino batay sa Lohikal na Paglalahad ay may mapaglarawang katumbas na Higit na Mahusay at may literal



na paliwanag na *Kasiya-siya*. Nagpapakita lamang na mataas ang nakuhanang marka ng mga mag-aaral sa ginawang pagsusulit gamit ang materyal.

Batay sa resulta na ipinakita sa talahanayan walo, nangangahulugan lamang ito na may lubos itong katanggap-tanggap na layunin na siyang naging mapa ng binuong

kagamitan.

Ang talahanayan sa ibaba ay nagpapakita ng paggamit ng audio-grapiya na kagamitan sa pagkatuto ng Ortograpiyang Filipino sa Lohikal na Paglalahad ng mga mag-aaral, upang maisakatuparan ang pag-aaral tumulong ang mga tagatugon.

Talahanayan 9 Paggamit ng Audio-grapiya na Kagamitan sa pagkatuto ng Ortograpiyang Filipino Sa Lohikal na Pagganap ng mga Mag-aaral sa Paglalahad

Paggamit sa audio-grapiya		Pagganap
Kaangkupan	Pearson Correlation	.132**
	Sig. (2-tailed)	.000
	N	99
	Strength	<i>Napakababang pagkakaugnay</i>
	Analysis	<i>Makabuluhan</i>
Pagsasalita	Pearson Correlation	.505*
	Sig. (2-tailed)	.000
	N	99
	Strength	<i>Katamtamang pagkakaugnay</i>
	Analysis	<i>Makabuluhan</i>
Organisasyon	Pearson Correlation	.120*
	Sig. (2-tailed)	.000
	N	99
	Strength	<i>Napakababang pagkakaugnay</i>
	Analysis	<i>Makabuluhan</i>
Tunog	Pearson Correlation	.309*
	Sig. (2-tailed)	.017
	N	20
	Strength	<i>Mababang pagkakaugnay</i>
	Analysis	<i>Makabuluhan</i>

Ang talahanayan sa sumunod na pahina ay nagpapakita ng paggamit kaugnayan ng Ortograpiyang Filipino sa pagsulat ng reflektib journal sa lohikal na paglalahad ng mga mag-aaral,

ang pag-aaral na isinagawa ay makikita ang resulta sa talahanayan.

Talahanayan 10 Makabuluhang Kaugnayan ng Ortograpiyang Filipino sa Pagsulat ng reflektib Journal sa Lohikal na Paglalahad ng mga Mag-aaral

Paggamit sa audio-grapiya		Pagganap
Tema	Pearson Correlation	.171*
	Sig. (2-tailed)	0
	N	99
	Strength	<i>Napakababang pagkakaugnay</i>
Nilalaman	Pearson Correlation	.375*
	Sig. (2-tailed)	0
	N	99
	Strength	<i>Mababang pagkakaugnay</i>
Mekanismo	Pearson Correlation	.003*
	Sig. (2-tailed)	0
	N	20
	Strength	<i>Napakababang pagkakaugnay</i>
	Analysis	<i>Makabuluhan</i>



Palatandaan:

Sukatan	Katibayan ng Ugnayan
±0.00	walang pagkakaugnay, Walang relasyon
±0.01 – ±0.20	napakababang pagkakaugnay, Halos walang relasyon
±0.21 – ±0.40	mababang pagkakaugnay, Tiyak ngunit mababaw ang relasyon
±0.41 – ±0.70	katamtamang pagkakaugnay, Makabuluhan ang relasyon
±0.71 – ±0.90	mataas na pagkakaugnay, Kapuna-puna ang relasyon
±0.91 – ±0.99	napakataas na pagkakaugnay, Mapapaniwalaan ang relasyon
±1.00	Lubos ang pagkakaugnay, Ganap na may relasyon

Talahanayan bilang 9 at 10 ay nagpapakita ng makabuluhang kaugnayan ng paggamit ng Audio-grapiya na kagamitan sa pagkatuto ng Ortograpiyang Filipino at Pagsulat ng Reflective Journal sa pagganap ng mga mag-aaral. Ang datos ay ginamitan ng istatistikong pamamaraan na nagresulta ng tinuos na halaga para sa *r-value*.

Ipinapakita dito na ang tinuos na halaga para sa Kaangkupan at may *r-value* na 0.132, para sa Pagsasalita, may *r-value* na 0.505, para sa Organisasyon may *r-value* na 0.120, para sa Tunog may *r-value* na 0.309, para sa Tema at may *r-value* na 0.171, para sa Nilalaman at may *r-value* na 0.375 at para sa Mekanismo at may *r-value* na 0.003 ay may napakababa hanggang katamtamang pagkakaugnay at mayroong mababa na suportang tinuos na *p-value* at ang pagsusuri ay makabuluhan.

Base sa datos na nakalap, ipinapakita nito na ang walang bisang palagay na “Walang makabuluhang kaugnayan ng paggamit ng

Audio-grapiya na kagamitan sa pagkatuto ng Ortograpiyang Filipino at Pagsulat ng Reflective Journal sa pagganap ng mga mag-aaral” ay wag tanggapin, ipinapakita nito na “may makabuluhang” kaugnayan sa pagitan nila.

Kaya naman marapat lamang na ang paggamit ng audio-grapiya sa pagtuturo ng Ortograpiyang Filipino ay dapat patuloy na gamitin upang mas mahasa ang husay ng mga mag-aaral.

Nagpapakita lamang na ang mga naging resulta sa ginawang pag-aaral ng mananaliksik ay lubos na naging katanggap-tanggap at ang layunin sa pag-aaral ay nakamit ng mananaliksik ay nakamit ang layunin na siyang naging mapa ng binuong kagamitan.

Ang huling talahanayan ay nagpapakita ng nagging plano ng mananaliksik matapos maisagawa at maisakatuparan ang pag-aaral.

Talahanayan 11 Mga Plano Upang Mapaunlad ang Paggamit ng Audio-grapiya bilang Lunsaran sa Pagtuturo

Programa/Titulo	Deskripsyon	Layunin	Istratehiya	Mga Kasangkot
Paggamit ng Audio-grapiya bilang Lunsaran sa Pagtuturo ng Ortograpiyang Filipino	Ang audio-grapiya ay isang kagamitan sa pagtuturo ng Ortograpiyang Filipino, hindi lamang ang kaalaman sa Ortograpiyang Filipino ang malilinalang ng mga mag-aaral kundi maging ang kanilang pakikinig sa kagamitang ginawa ng mananaliksik.	Matalakay ang mga tuntunin sa Ortograpiyang Filipino gamit ang tinatwag na Audio-grapiya.	Mabigyang kaalaman sa paggamit, maging sa nilalaman ng Audio-grapiya sa pamamagitan ng isang palihan.	Mga guro na nagtuturo ng Asignaturang Filipino.
	Bawat mag-aaral ay makararanas na gamitin ang Audio-grapiya upang maging batis ng kanilang kaalaman.	Mabatid at mapukaw ang atensyon ng mga mag-aaral sa upang mas pag-ibayuhin pa pag-aaral ng Ortograpiyang Filipino.	Mabigyan ng kaalaman ang mga mag-aaral patungkol sa Orotograpiyang Filipino at mas mahasa ang kanilang pagkatha ng mga sulatin sa paggamit ng tamang gramatika, bantas at sa hiram na mga salita sa pamamagitan ng malayang talakayan. Ang isa pang paraan ay ang pagkakaroon ng symposium.	Mga mag-aaral at mga guro na hahasa sa kahuyasan ng mga mag-aaral.



Ang talahanayan 11 ay isang plano na naglalayong mas pataasin ang kaalaman ng mga mag-aaral patungkol sa Ortograpiyang Filipino gamit ang tinatawag na lunsarang Audio-grapiya.

Ang audio-grapiya ay isang kagamitan sa pagtuturo na nabuo ng ginamit ng mananaliksik sa kanyang pag-aaral, ang pag-aaral na isinagawa ay naging makabuluhan, kung kaya't humantong ang mananaliksik sa pagbuo ng isang plano upang mas mahasa pa ang mga mag-aaral sa araling Ortograpiya. Hindi lamang ang mga mag-aaral ang matutulungan ng pananaliksik kundi maging ang mga guro, nagkaroon ang mga guro ng makabagong kagamitan sa pagtuturo ng Ortograpiyang Filipino, isang kagamitan na mas makapupukaw ng atensyon ng mga mag-aaral sa pamamagitan ng Audio-grapiya.

Ang isang paraan upang makakuha ng mas mahusay na pag-unawa sa isang paksa ay ang replektibong sanaysay, o sanaysay ng pag-iisip. Iyon ay isang uri ng pagsusulat na naglalayong ipakita ang mga opinyon, personal na karanasan, at repleksyon ng isang manunulat tungkol sa isang partikular na paksa. Sa pamamagitan ng paggamit ng replektibong sanaysay, ang may-akda ay maaaring gumamit ng kanyang sariling mga karanasan, damdamin, at mga ideya nang malaya upang magbigay sa mga mambabasa ng mas malawak na pananaw.

Isa sa mahalagang kasangkapan ang kahusayan sa pagsulat lalo na sa akademikong sulatin. Ang ilang mag-aaral ay dumaraan sa suliranin ng sulatin pang-akademiko. Ang isa sa mahalagang kakayahan na mayroon ang mag-aaral sa loob ng silid-aralan ang ortograpikong literasi na nauukol sa bilang ng mga kinakailangang kasanayan para sa mabisang komunikasyon.

4. KONKLUSYON AT REKOMENDASYON

Dahil sa resulta ng pag-aaral humantong ang pananaliksik na sa konklusyon na;

Batay sa datos na nakalap, ipinapakita nito na ang walang bisang palagay na “Walang makabuluhang kaugnayan ng paggamit ng Audio-grapiya na kagamitan at pagsulat ng reflektib journal sa lohikal na pagganap ng mga mag-aaral” kayat ang haypotesis sa unang kabanata ay wag tanggapin, ipinapakita nito na “may makabuluhang” kaugnayan sa pagitan nila. Nagpapatunay lamang ito na nagkaroon ng kaugnayan ang paggamit ng audio- grapiya sa pagsulat ng mga mag-aaral.

Batay sa datos na nakalap, ipinapakita nito na ang walang bisang palagay na “Walang makabuluhang kaugnayan ang Ortograpiyang Filipino sa pagsulat ng reflektib journal sa lohikal na pagganap ng mga mag-aaral” kayat ang haypotesis sa unang kabanata ay wag tanggapin, ipinapakita nito na “may makabuluhang” kaugnayan sa pagitan nila. Nagpapatunay lamang ito na nagkaroon ng kaugnayan ang paggamit ng audio- grapiya sa pagsulat ng mga mag-aaral.

Batay naman sa kinalabasan at konklusyon ng pag-aaral, iminumungkahi ng mananaliksik ang mga sumusunod na rekomendasyon.

1. Para sa paaralan, gamitin ang audio- grapiya bilang kagamitang panturo upang makatulong sa mga mag-aaral sa pagsulat ng reflektib jornal at patutuloy na

suportahan ng paaralan ang mga guro sa makalikha ng bagong kagamitan na makatutulong sa kakayahan ng mga mag-aaral

2. Para sa mga guro, patuloy na bumuo ang mga guro ng mga kagamitan sa pagtuturo upang tumaas pa ang kalidad ng pagtuturo.
3. Para sa mga mag-aaral, sa tulong ng mga guro, magkaroon ng pagkakaisa ang mga mag-aaral upang masuportahan ang paggamit ng mga makabagong dulog sa bawat paaralan.

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GRAMATECHA BILANG KAGAMITANG PANTURO SA KASANAYANG PANGGRAMATIKA SA PAGGANAP NG MGA MAG-AARAL

Kristy Limchoco Abad

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pangunahing layunin ng pag-aaral na ito ay tukuyin ang antas ng kakayahang panggramatika sa Filipino ng mga mag-aaral; ilarawan ang pagkakaiba ng kakayahang panggramatika ng mga mag-aaral sa mga bahagi ng panalita; at kilalanin ang pagkakaiba ng antas ng kakayahang panggramatika ng mga mag-aaral.

Ang deskriptibong pag-aaral na ito ay gumamit ng isandaan at walumpu't anim (186) na mag-aaral, mula sa Baitang 11 ng Camp Vicente Lim Integrated School. Purposib sampling ang ginamit sa pag-aaral na ito upang makuha at mataya ang kaukulang resulta ng pananaliksik. Ang talatanungan, materyal at mga pagsusulit ay ginamit upang masagot ang nasabing pananaliksik.

Lumabas sa resulta ng pag-aaral na ito na ang antas ng paggamit sa GramaTECHa gayundin sa antas ng panturo sa kasanayang panggramatika lahat ay katanggap-tanggap na ang sagot ng mga tagatugon sa kabuuan ng bawat bahagi ay may puna na lubos na sumasang-ayon at literal na paliwanag na "lubhang mataas." Para naman sa antas sa pagganap ng mga mag-aaral batay sa metakognisyon ay may mapaglarawang katumbas na pinakamahusay at higit na mahusay at may literal na paliwanag na Napaka kasiya-siya. Ang antas sa pagganap ng mga mag-aaral batay sa kritikal na pag-iisip ay may mapaglarawang katumbas na pinakamahusay, higit na mahusay at mahusay at may literal na paliwanag na Napaka kasiya-siya.

Batay sa kinalabasan ng pag-aaral na ang konklusyon na ito ay nabuo: "walang makabuluhang ugnayan sa pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip" ay makabuluhan; Ang haypotesis na nagsasabing "walang makabuluhang epekto ang paggamit ng GramaTECHa" at "walang makabuluhang epekto ang panturo sa kasanayang panggramatika" ay walang positibong epekto. Samakatuwid magsagawa ng mga pagsasanay at seminar para sa mga guro upang mapalawak ang kanilang kaalaman sa mga alternatibong gawain.

Matapos ang pag-aaral at pagsusuri ng mga natuklasan, iminumungkahi ng mananaliksik sa administrador ng paaralan at mga guro sa Filipino ay gamitin ang GramaTECHa gamit ang iba't ibang paraan ng pagkatuto ng akademikong sulatin upang higit na matuto at mahikayat ang mga mag-aaral sa pagganap ng mga ito sa kanilang gawaing pang-akademiko; Ang mga guro ay maaari pang paunlarin ang GramaTECHa na makatutulong sa pagpapaunlad ng pagkatuto ng mga mag-aaral tungo sa isang makabuluhang pagganap; Ang mga mag-aaral ay marapat na bigyang-pansin ang kanilang kawilihan at paunlarin ang kanilang abilidad at pagpupursigi para sa pansariling pagkatuto sa paggamit ng GramaTECHa; Ang pagkatuto ng mga mag-aaral ay nakabatay sa kanilang kakayahang matuto kung kaya't marapat na maging responsable ang mga ito sa kanilang pagpoproseso ng mga impormasyon upang mas maging ganap ang pagkatuto; Ang GramaTECHa ay maaring gamitin ng ibang guro sa Filipino ng Senior High partikular sa baitang 11 at gumamit ng iba pang aktibong paraan ng pag-aaral bilang dagdag na kagamitang panturo kung saan makatutulong sa pagganap ng mga mag-aaral; at para mas masigurado ang maayos na akademikong pagganap, ang iba pang mga mananaliksik ay hinihikayat na magsagawa pa ng mga kaugnay na pag-aaral ukol sa gramatika upang malaman ang iba pang salik na nakaapekto sa pagkatuto sa gramatika.

SUSING SALITA: gramatika; kakayahang panggramatika; Kagamitang Panturo

1. PANIMULA

Ang kasalukuyang kurikulum sa Pilipinas ay nakatuon sa paglinang ng mga kasanayan sa komunikasyon ng mga mag-aaral. Upang mapabuti ang kakayahan ng mga mag-aaral sa komunikasyon, mahalagang palakasin ang kanilang kaalaman sa gramatika. Kaya't upang matupad ang layunin ng kurikulum, kailangan suriin ang kasanayan sa gramatika ng mga mag-aaral.

Kapag ang mga guro ay nagtuturo ng mga tuntunin ng wika nang malinaw at maayos sa pagsulat at pasalitang anyo, kinakailangang masuri ang kasanayan sa gramatika ng mga mag-aaral upang matukoy at maitama ang kanilang mga kahinaan. Kinakailangan din ang pagsasanay sa gramatika

upang lubos na matutunan ng mga mag-aaral ang mga tuntunin ng wikang kanilang pinag-aaralan.

Samantala, inisa-isa ni De Juan (2016), ang mga suliranin ng mga guro sa pagtuturo ng wikang Filipino. Una, ang pagkakaroon ng dayuhang kamalayan sa pakikipagtalastasan. Pangalawa, kakulangan nila ng kaalaman sa mga teknik o estratehiya sa pagtuturo ng pagsulat. Pangatlo, kakulangan ng kaalaman sa istrukturang gramatikal (pagbabaybay, paggamit ng iba't ibang bahagi ng pananalita). Ikaapat, hindi lubos na paglinang sa kahusayan sa paggamit ng wikang Filipino sa pagtuturo. At panghuli, hirap sa pagtuturo ng mga matatalinhagang salita o pahayag ang mga guro at mag-aaral, at



ang kakulangan ng kaalaman sa paggamit ng mga awtentikong kagamitan sa pagtaya sa kaalaman ng mga mag-aaral.

Ayon kay De Guzman (2017), sa kanyang artikulo, sa panahon ng makabagong edukasyon, ang paggamit ng elektronikong kagamitan sa pagtuturo ay magiging mabisang paraan upang mapaunlad ang kaalaman ng bawat kabataang Pilipino. Ipinapahayag niya na nasa panahon tayo ng malaking pagbabago, kaya't bilang bahagi ng pag-unlad dapat yakapin ang makabagong kagamitang elektroniko sa ating pagtuturo.

Layunin ng pag-aaral na ito na malaman ang antas ng kasanayang panggramatika ng mga mag-aaral sa Filipino. Ipliwanag ang pagkakaiba sa kasanayan sa gramatika ng mga mag-aaral sa iba't ibang bahagi ng pananalita. Kilalanin ang mga pagkakaiba sa antas ng kahusayan sa katutubong wika.

1.1 Paglalahad ng Suliranin

Sa pananaliksik na ito, upang mataya ang epekto ng paggamit ng GramaTECHa bilang Kagamitang Panturo sa Kasanayang Panggramatika sa Pagganap ng mga Mag-aaral nilalayon matukoy ang mga sumusunod na katanungan:

1. Ano ang antas ng Paggamit ng GramaTECHa bilang Kagamitang Panturo batay sa;
 - 1.1 Kakayahang matuto;
 - 1.2 Kakayahang umangkop;
 - 1.3 Kaangkupan sa paggamit;
 - 1.4 Kapasidad; at
 - 1.5 Aksesibiliti?
2. Ano ang antas ng Panturo Sa Kasanayang Panggramatika batay sa;
 - 2.1 Pasulat na Pabaybay;
 - 2.2 Pagpili ng mga salita; at
 - 2.3 Wastong gamit ng salita?
3. Ano ang antas ng Pagganap ng mga mag-aaral batay sa;
 - 3.1. Metakognisyon; at
 - 3.2. Kritikal na Pag-iisip?
4. May makabuluhan bang ugnayan sa pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip?
5. May makabuluhang epekto ba ang Paggamit sa GramaTECHa batay sa Kakayahang Matuto, Kakayahang Umangkop, Kaangkupan sa Paggamit, Kapasidad at Aksesibiliti sa pagganap ng mga mag-aaral?
6. May makabuluhang epekto ba ang Panturo Sa Kasanayang Panggramatika batay sa Pasulat na Pabaybay, Pagpili ng mga

Talahanayan 1. Antas ng Paggamit sa GramaTECHa batay sa Kakayahang Matuto

Mga Pahayag	Mean	SD	Puna
<i>Napauunlad ang kakayahang pagkatuto dahil mayroong iba't ibang teknik o estratehiya sa pagtuturo.</i>	4.87	0.44	Lubos na sumasang-ayon
<i>Napalalawak ang pag-unawa sa isang babasahin dahil sa maayos na pagkakabanghay ng nilalaman.</i>	4.75	0.47	Lubos na sumasang-ayon
<i>Naibabahagi ang isang kaalaman sa tulong ng malinaw at maayos na presentasyon.</i>	4.78	0.43	Lubos na sumasang-ayon
<i>Napabilibil ang pagkaunawa sa mga aralin dahil sa makabagong teknolohiya sa pagtuturo.</i>	4.73	0.45	Lubos na sumasang-ayon
<i>Nakapagbibigay ng maayos at malinaw na impormasyon sa isang tiyak na paksa.</i>	4.80	0.42	Lubos na sumasang-ayon

Overall Mean: 4.79

Standard Deviation: 0.23

Literal na paliwanag: Lubhang Mataas

Salita at Wastong gamit ng Salita sa pagganap ng mga mag-aaral?

7. Anong planong gawain ang nais imungkahi matapos ang pag-aanalisa ng pag-aaral?

2. METODOLOHIYA NG PANANALIKSIK

Sa pag-aaral na ito ang mananaliksik ay gumamit ng Deskriptibong Pamamaraan upang makakalaop ng mga tiyak na kasagutan at mahahalagang impormasyon hinggil sa GramaTECHa bilang Kagamitang Panturo sa Kasanayang Panggramatika sa Pagganap ng mga mag-aaral. Ginamit ito upang maipakita ang detalyadong konklusyon sa haypotesis o hinuha sa pamamagitan ng masinsinang pag-aaral at tamang interpretasyon.

Ayon kay Maranan (2016), ay isang disenyong pangangalap ng impormasyon hinggil sa mga salik na kaugnay ng paksa ng pananaliksik. Ito ay ginamit upang maipakita ang matibay na konklusyon sa hinuha sa pamamagitan ng ebidensya at pagpapatunay sa mga nakalap na impormasyon.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay tumutukoy sa presentasyon, analisis at interpretasyon ng mga datos.

Ang bawat impormasyong nakuha ay inilahad nang maayos sa mga talahanayan. Ang mga datos na ipinakita ay nakaayos ayon sa pagkakasunod-sunod sa paglalahad ng suliranin.

Antas ng Paggamit sa GramaTECHa bilang Kagamitang Panturo sa Kasanayang Panggramatika

Ang pag-aaral na ito ay naglalaman ng antas ng paggamit sa GramaTECHa bilang kagamitang panturo sa kasanayang panggramatika ay sinukat batay sa kakayahang matuto, kakayahang umangkop, kaangkupan sa paggamit, kapasidad at aksesibiliti.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Pahayag, Mean, Standard Deviation, Puna at Literal na paliwanag, upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Ang Talahanayang 1 ay nagpapakita ng Antas ng Paggamit sa GramaTECHa batay sa Kakayahang Matuto.



Sa unang pahayag na “Napauunlad ang kakayahang pagkatuto dahil mayroong iba’t ibang teknik o estratehiya sa pagtuturo” ay nakakuha ng mean score na 4.87 at standard deviation na 0.44 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “Napalalawak ang pag-unawa sa isang babasahin dahil sa maayos na pagkakabanghay ng nilalaman” ay nakakuha ng mean score na 4.75 at standard deviation na 0.47 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “Naibabahagi ang isang kaalaman sa tulong ng malinaw at maayos na presentasyon” ay nakakuha ng mean score na 4.78 at standard deviation na 0.43 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “Napabibilis ang pagkaunawa sa mga aralin dahil sa makabagong teknolohiya sa pagtuturo” ay nakakuha ng mean score na 4.73 at standard deviation na 0.45 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “Nakapagbibigay ng maayos at malinaw na impormasyon sa isang tiyak na paksa” ay nakakuha ng mean score na 4.80 at standard deviation na 0.42 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

May kabuoang mean na 4.79, standard deviation na 0.23 at ipinapakita na ang antas ng Paggamit sa GramaTECHa bilang kagamitang panturo batay sa kakayahang matuto ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng paggamit sa gramaTECHa batay sa kakayahang matuto. Batay sa datos na nakalap, lubos na sumasang-ayon ang paggamit sa gramaTECHa batay sa kakayahang matuto.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na napauunlad ang pagkatuto ng mga mag-aaral sa tulong ng teknolohiya pati na rin ang iba’t ibang estratehiya sa pagtuturo. Ang mga resulta ay nagpapakita ng positibong pagtanggap at pagtutugma ng mga respondente sa paggamit ng GramaTECHa bilang kagamitang panturo sa kasanayang panggramatika, na nagpapahiwatig ng potensyal na epekto nito sa pagpapaunlad ng mga kakayahang ng mga mag-aaral sa larangang ito.

Talahanayan 2. Antas ng Paggamit sa GramaTECHa batay sa Kakayahang Umangkop

Mga Pahayag	Mean	SD	Puna
<i>Nakabubuo o napagsusunod-sunod ang mga salita sa loob ng isang pangungusap ng wasto.</i>	4.63	0.56	Lubos na sumasang-ayon
<i>Nauunawaan nang lubos ang nilalaman at salita.</i>	4.66	0.53	Lubos na sumasang-ayon
<i>Malinaw na nakasulat ang paksang kakayahang komunikatibo at gramatika.</i>	4.73	0.47	Lubos na sumasang-ayon
<i>Nababasang mabuti ang nilalaman dahil ginamitan ito ng angkop na mga salita para sa mga mag-aaral.</i>	4.83	0.37	Lubos na sumasang-ayon
<i>Naibibigay ang mga impormasyong nakapaloob sa isang tiyak na paksa ng maayos at malinaw.</i>	4.80	0.40	Lubos na sumasang-ayon

Overall Mean: 4.74

Standard Deviation: 0.25

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “Nakabubuo o napagsusunod-sunod ang mga salita sa loob ng isang pangungusap ng wasto.” ay nakakuha ng mean score na 4.63 at standard deviation na 0.56 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “Nauunawaan nang lubos ang nilalaman at salita.” ay nakakuha ng mean score na 4.66 at standard deviation na 0.53 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “Malinaw na nakasulat ang paksang kakayahang komunikatibo at gramatika” ay nakakuha ng mean score na 4.73 at standard deviation na 0.47 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “Nababasang mabuti ang nilalaman dahil ginamitan ito ng angkop na mga salita para sa mga mag-aaral” ay nakakuha ng mean score na 4.83 at standard deviation na 0.37 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “Naibibigay ang mga impormasyong nakapaloob sa isang tiyak na paksa ng maayos at malinaw” ay nakakuha ng mean score na 4.80 at standard deviation na 0.40 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

May kabuoang mean na 4.74, standard deviation na 0.25 at ipinapakita na ang antas ng Paggamit sa GramaTECHa bilang Kagamitang Panturo batay sa kakayahang umangkop ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng Paggamit sa gramaTECHa batay sa kakayahang umangkop. Batay sa datos na nakalap, lubos na sumasang-ayon ang Paggamit sa gramaTECHa batay sa kakayahang umangkop.

Samakatuwid, ipinapakita ng mga resulta na sa kasalukuyang panahon ay higit na kinakailangan ng mag-aaral na magkaroon ng kakayahang umangkop sa isang bagay.

Ang Talahanayan 3 ay nagsasaad ng Antas ng Paggamit sa GramaTECHa batay sa Kaangkuhan sa paggamit.



Talahanayan 3. Antas ng Paggamit sa GramaTECHa batay sa Kaangkupan sa Paggamit

Mga Pahayag	Mean	SD	Puna
May tiyak na impormasyon, mga halimbawa, at sanggunian.	4.76	0.51	Lubos na sumasang-ayon
Nakapupukaw ng interes makukulay at may mga larawan ang isang kagamitang panturo.	4.73	0.49	Lubos na sumasang-ayon
Madaling nagamit ang materyal sa mahusay na pag-unawa sa mga tanong.	4.72	0.47	Lubos na sumasang-ayon
Nalilintang ang mabilis na pag-iisip dahil sa mga nakalahad na halimbawa.	4.74	0.44	Lubos na sumasang-ayon
Organisado ang bawat bahagi.	4.80	0.40	Lubos na sumasang-ayon

Overall Mean: 4.76

Standard Deviation: 0.25

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “May tiyak na impormasyon, mga halimbawa, at sanggunian” ay nakakuha ng mean score na 4.76 at standard deviation na 0.51 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “Nakapupukaw ng interes makukulay at may mga larawan ang isang kagamitang panturo” ay nakakuha ng mean score na 4.73 at standard deviation na 0.49 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “Madaling nagamit ang materyal sa mahusay na pag-unawa sa mga tanong” ay nakakuha ng mean score na 4.72 at standard deviation na 0.47 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “Nalilintang ang mabilis na pag-iisip sa Kapasidad.

dahil sa mga nakalahad na halimbawa” ay nakakuha ng mean score na 4.74 at standard deviation na 0.44 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “Organisado ang bawat bahagi” ay nakakuha ng mean score na 4.80 at standard deviation na 0.40 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Batay sa datos na nakalap, malinaw na ipinakita na ang kaangkupan sa paggamit ay may malaking ginagampanan sa pag-unawa ng mga mag-aaral sa kasanayang panggramatika. Dahil ang maayos at kaangkupan magamit ang isang bagay ay nagkakaroon ng mabilisang pag-unawa sa isang paksa.

Ang Talahanayang 4 ay nagsasaad ng Antas ng Paggamit sa GramaTECHa batay

Talahanayan 4. Antas ng Paggamit sa GramaTECHa batay sa Kapasidad

Mga Pahayag	Mean	SD	Puna
Natutulungan ang mga mag-aaral sa pagpapalago at pagpapaunlad ng kanilang kaalaman sa nilalaman ng materyal.	4.81	0.47	Lubos na sumasang-ayon
Naisasakatuparan ang kolaborasyon sa klase dahil sa epektibong kagamitang panturo.	4.79	0.45	Lubos na sumasang-ayon
Nabibigyang-tuon at nagbibigay ng sapat na babasahin sa bawat mag-aaral ang detalye ng aralin.	4.82	0.40	Lubos na sumasang-ayon
May kasiyahan sa pagtanggap ng mga impormasyon bilang bahagi ng pagkatuto.	4.79	0.45	Lubos na sumasang-ayon
Nalilintang ng materyal ang kaalaman ng mag-aaral.	4.74	0.44	Lubos na sumasang-ayon

Overall Mean: 4.80

Standard Deviation: 0.23

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “Natutulungan ang mga mag-aaral sa pagpapalago at pagpapaunlad ng kanilang kaalaman sa nilalaman ng materyal” ay nakakuha ng mean score na 4.81 at standard deviation na 0.47 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “Naisasakatuparan ang kolaborasyon sa klase dahil sa epektibong kagamitang panturo” ay nakakuha ng mean score na 4.79 at standard deviation na 0.45 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “Nabibigyang-tuon at nagbibigay ng sapat na babasahin sa bawat mag-aaral ang detalye ng aralin” ay nakakuha ng mean score na 4.82 at standard deviation na 0.40 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “May kasiyahan sa pagtanggap ng mga impormasyon bilang bahagi ng pagkatuto” ay nakakuha ng mean score na 4.79 at standard deviation na 0.45 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.



At sa ikalimang pahayag na “*Nalilintang ng materyal ang kaalaman ng mag-aaral*” ay nakakuha ng mean score na 4.74 at standard deviation na 0.44 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

May kabuoang mean na na 4.80, standard deviation 0.23 at ipinapakita na ang antas ng Paggamit sa GramaTECHa bilang kagamitang panturo batay sa kapasidad ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng Paggamit sa gramaTECHa batay

sa kapasidad. Batay sa datos na nakalap, lubos na sumasang-ayon ang Paggamit sa gramaTECHa batay sa kapasidad.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na malaki ang ginagampanan ng kapasidad sa paggamit ng GramaTECHa. Sa pamamagitan ng kapasidad ng isang aplikasyon, maaaring mapabuti ang pagganap, pagtugon sa mga pangangailangan ng mga mag-aaral, at maging matagumpay.

Ang talahanayan 5 ay nagpapakita ng antas ng Paggamit ng GramaTECHa batay sa aksesibiliti.

Talahanayan 5. Antas ng Paggamit sa GramaTECHa batay sa Aksesabiliti

Mga Pahayag	Mean	SD	Puna
<i>Naisasagawa ang isang gawain nang may sapat na oras.</i>	4.66	0.55	Lubos na sumasang-ayon
<i>Nakatutulong ang mga gawain at halimbawa sa app.</i>	4.80	0.44	Lubos na sumasang-ayon
<i>Naisasaalang-alang ang mabilis na paggamit ng app.</i>	4.68	0.49	Lubos na sumasang-ayon
<i>Nakatutulong ang GramaTECHa dahil maaaring mabasa online man o offline ang nilalaman nito.</i>	4.94	0.25	Lubos na sumasang-ayon
<i>Napabilis ang pag-unawa sa aralin ng isang mag-aaral.</i>	4.78	0.41	Lubos na sumasang-ayon

Overall Mean: 4.78

Standard Deviation: 0.24

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “*Naisasagawa ang isang gawain nang may sapat na oras*” ay nakakuha ng mean score na 4.66 at standard deviation na 0.55 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “*Nakatutulong ang mga gawain at halimbawa sa app*” ay nakakuha ng mean score na 4.80 at standard deviation na 0.44 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “*Naisasaalang-alang ang mabilis na paggamit ng app*” ay nakakuha ng mean score na 4.68 at standard deviation na 0.49 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “*Nakatutulong ang GramaTECHa dahil maaaring mabasa online man o offline ang nilalaman nito*” ay nakakuha ng mean score na 4.94 at standard deviation na 0.25 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “*Napabilis ang pag-unawa sa aralin ng isang mag-aaral*” ay nakakuha ng mean score na 4.78 at standard deviation na 0.41 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

May kabuoang mean na 4.78, standard deviation 0.24 at ipinapakita na ang Antas ng Paggamit sa GramaTECHa bilang

Kagamitang Panturo batay sa Aksesibiliti ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng Paggamit sa gramaTECHa batay sa aksesibiliti. Batay sa datos na nakalap, lubos na sumasang-ayon ang Paggamit sa gramaTECHa batay sa aksesibiliti.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na malaki ang ginagampanan ng aksesibiliti sa isang kagamitan. Kaugnay nito, sa proseso ng pagkatuto ng isang mag-aaral, napakahalaga na dulog na ilalapat ng guro sa pagtuturo na kung saan tumutukoy sa lawak at kung gaano kabilis magagamit ang isang aplikasyon.

Antas ng Panturo sa Kasanayang Panggramatika

Ang pag-aaral na ito ay naglalaman ng antas ng panturo sa kasanayang panggramatika ay sinukat batay sa pasulat na pabaybay, pagpili ng mga salita at wastong gamit ngb salita.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Pahayag, Mean, Standard Deviation, Puna at Literal na paliwanag, upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Ang Talahanayang 6 ay nagpapakita ng Antas ng Panturo sa Kasanayang Panggramatika batay sa Pasulat na Pabaybay.



Talahanayan 6. Antas ng Panturo Sa Kasanayang Panggramatika batay sa Pasulat na Pabaybay

Mga Pahayag	Mean	SD	Puna
<i>Nakatutulong sa pagsasaayos ng mga titik sa tamang pagkakasunod-sunod upang makabuo ng mga salita.</i>	4.90	0.40	Lubos na sumasang-ayon
<i>Nakatutulong sa pagsulat ng repleksyon sa pagsusuri ng akda at reaksyong papel.</i>	4.74	0.48	Lubos na sumasang-ayon
<i>Nakatutulong upang maiwasan ang kamalian sa pagbuo ng isang salita, pangungusap, at talata.</i>	4.82	0.40	Lubos na sumasang-ayon
<i>Nabibigyang halaga ang bawat titik sa Alpabetong Filipino.</i>	4.83	0.41	Lubos na sumasang-ayon
<i>Nabibigyang tuon ang pagkakaroon ng kamalayan sa pagsulat ng pangungusap.</i>	4.84	0.37	Lubos na sumasang-ayon

Overall Mean: 4.83

Standard Deviation: 0.22

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “*Nakatutulong sa pagsasaayos ng mga titik sa tamang pagkakasunod-sunod upang makabuo ng mga salita*” ay nakakuha ng mean score na 4.90 at standard deviation na 0.40 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “*Nakatutulong sa pagsulat ng repleksyon sa pagsusuri ng akda at reaksyong papel*” ay nakakuha ng mean score na 4.74 at standard deviation na 0.48 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “*Nakatutulong upang maiwasan ang kamalian sa pagbuo ng isang salita, pangungusap, at talata*” ay nakakuha ng mean score na 4.82 at standard deviation na 0.40 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “*Nabibigyang halaga ang bawat titik sa Alpabetong Filipino*” ay nakakuha ng mean score na 4.83 at standard deviation na 0.41 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “*Nabibigyang tuon ang pagkakaroon ng kamalayan sa pagsulat ng pangungusap*” ay nakakuha ng mean score na 4.84 at standard deviation na 0.37 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

May kabuuang mean na 4.83, standard deviation 0.22 at ipinapakita na antas ng Panturo sa Kasanayang Panggramatika batay sa Pasulat na Pabaybay ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng panturo sa kasanayang panggramatika batay sa pasulat na pabaybay. Batay sa datos na nakalap, lubos na sumasang-ayon ang panturo sa kasanayang panggramatika batay sa pasulat na pabaybay.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na mainam na may sapat na kaalaman ang mga mag-aaral pagdating sa wastong baybay ng mga salita sa pagsulat ng isang akdang pampanitikan. Sapagkat ito ang magiging gabay upang maging makabuluhan at maayos ang kanilang nabuong salaysay.

May kabuoang mean na 4.80, standard deviation na 0.26 at ipinapakita na ang antas ng panturo sa kasanayang panggramatika batay sa pagpili ng mga salita ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng panturo sa kasanayang panggramatika batay sa pagpili ng mga salita. Batay sa datos na nakalap, lubos na sumasang-ayon ang panturo sa kasanayang panggramatika batay sa pagpili ng mga salita.

Ang talahanayang 7 ay nagpapakita ng antas ng panturo sa kasanayang panggramatika batay sa pagpili ng mga salita.

Talahanayan 7. Antas ng Panturo Sa Kasanayang Panggramatik batay sa Pagpili ng mga Salita

Mga Pahayag	Mean	SD	Puna
<i>Naisasagawa ang bawat ng gawain sa tulong ng angkop na salita.</i>	4.78	0.49	Lubos na sumasang-ayon
<i>Nagagamit ng wasto ang salita sa isang pangungusap.</i>	4.73	0.49	Lubos na sumasang-ayon
<i>Napalalawak ang kaalaman sa pagsulat ng pangungusap.</i>	4.83	0.39	Lubos na sumasang-ayon
<i>Naiaangkop ang mga kahulugan na ibinigay sa bawat salita na madaling maunawaan ng mga babasa.</i>	4.76	0.44	Lubos na sumasang-ayon
<i>Napauunlad ang kaalaman at kamalayan dahil sa pag-aaral ng gramatika.</i>	4.83	0.39	Lubos na sumasang-ayon

Overall Mean: 4.80

Standard Deviation: 0.26

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “*Naisasagawa ang bawat ng gawain sa tulong ng angkop na salita*” ay nakakuha ng mean score na 4.78 at standard deviation na 0.49 na may deskripsyon na lubhang

mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “*Nagagamit ng wasto ang salita sa*



isang pangungusap” ay nakakuha ng mean score na 4.73 at standard deviation na 0.49 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “*Napalalawak ang kaalaman sa pagsulat ng pangungusap*” ay nakakuha ng mean score na 4.83 at standard deviation na 0.39 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “*Naiiangkop ang mga kahulugan na ibinigay sa bawat salita na madaling maunawaan ng mga babasa*” ay nakakuha ng mean score na 4.76 at standard deviation na 0.44 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “*Napauunlad ang kaalaman at kamalayan dahil sa pag-aaral ng gramatika*” ay nakakuha ng mean score na 4.83 at standard deviation na 0.39 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na ang mga mag-aaral ay maaaring matanggap ang mataas na kalidad ng pagtuturoat suporta mula sa kanilang mga guro sa larangan na ito.

Ipinapakita sa Talahanayan 8 ang Antas ng Panturo sa Kasanayang Panggramatika batay sa Wastong gamit ng mga salita.

Talahanayan 8. Antas ng Panturo Sa Kasanayang Panggramatik batay sa Wastong gamit ng mga Salita

Mga Pahayag	Mean	SD	Puna
<i>Naging madali ang paggamit ng gramatika (ng, nang, may, mayroon at iba pa)</i>	4.86	0.45	Lubos na sumasang-ayon
<i>Nakatutulong ang paggamit ng simpleng mga salita.</i>	4.82	0.42	Lubos na sumasang-ayon
<i>Nabigyang tuon ang kaayusan ng salita o pagbuo ng mga pangungusap at organisasyon ng mga ideya.</i>	4.85	0.37	Lubos na sumasang-ayon
<i>Nabigyang linaw ang aralin sa gramatika sa pagbuo ng mga salita at pangungusap.</i>	4.86	0.35	Lubos na sumasang-ayon
<i>Nababatid ang mga salitang ginamit sa pahayag.</i>	4.87	0.34	Lubos na sumasang-ayon

Overall Mean: 4.86

Standard Deviation: 0.22

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “*Naging madali ang paggamit ng gramatika (ng, nang, may, mayroon at iba pa)*” ay nakakuha ng mean score na 4.86 at standard deviation na 0.45 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikalawang pahayag na “*Nakatutulong ang paggamit ng simpleng mga salita*” ay nakakuha ng mean score na 4.82 at standard deviation na 0.42 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikatlong pahayag na “*Nabigyang tuon ang kaayusan ng salita o pagbuo ng mga pangungusap at organisasyon ng mga ideya*” ay nakakuha ng mean score na 4.85 at standard deviation na 0.37 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “*Nabigyang linaw ang aralin sa gramatika sa pagbuo ng mga salita at pangungusap*” ay nakakuha ng mean score na 4.86 at standard deviation na 0.35 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

At sa ikalimang pahayag na “*Nababatid ang mga salitang ginamit sa pahayag*” ay nakakuha ng mean score na 4.87 at standard deviation na 0.34 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

May kabuuang mean na 4.86, standard deviation na 0.22 at ipinapakita na ang antas ng panturo sa kasanayang panggramatika batay sa wastong gamit ng salita ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Samakatuwid, lubhang mataas ang antas ng panturo sa kasanayang panggramatika batay sa wastong gamit ng mga salita. Batay sa datos na nakalap, lubos na sumasang-ayon ang panturo sa kasanayang panggramatika batay sa wastong gamit ng mga salita.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na ang pagsulat ng wastong gamit ng salita ay isang bagay na dapat taglayin ng bawat mag-aaral upang matamo ang ganap na pagkatuto sa gramatika.

Antas ng Pagganap ng mga Mag-aaral

Sa Talahanayan bilang 9 ay nagpapakita ng Antas ng pagganap ng mga mag-aaral batay sa metakognisyon.

Talahanayan 9. Antas ng Pagganap ng mga Mag-aaral batay sa Metakognisyon

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
26 – 30	157	84.41	Pinakamahusay
21 – 25	29	15.59	Higit na Mahusay
16 – 20	0	0.00	Mahusay
11 – 15	0	0.00	Di-gaanong mahusay
6 – 10	0	0.00	Di-Mahusay
0 – 5	0	0.00	Di-Lubhang mahusay



Total	186	100
Weighted Mean	27.63	
Pinakamababang Marka	22	
Pinakamataas na marka	30	Napaka kasiya-siya
Standard Deviation	2.26	

Ang pag-aaral na ito ay naglalaman ng Antas ng pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip. Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Marka, Frequency, Percentage, Mapaglarawang Katumbas, Weighted mean, Pinakamataas na marka, Pinakamababang Marka at Standard Deviation, upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Sa kabuoang isang daan at walumpu't anim na tagatugon, ang marka na "26 - 30" ay nakakuha ng pinakamataas na bilang na isang daan at limampu't pito na (157) o 84.41% ng kabuoang tumugon at may mapaglarawang katumbas na Pinakamahusay. Habang ang marka na "21 - 25" ay nakakuha ng pinakamababang bilang na dalawampu't siyam (29) o 15.59% ng kabuoang tumugon at may mapaglarawang katumbas na Higit na Mahusay.

May kabuoang (Weighted Mean=27.63, SD=2.26) at (pinakamababang marka = 22, pinakamataas na marka = 30) ipinapakita na ang Antas ng pagganap ng mga mag-aaral batay sa metakognisyon ay may mapaglarawang katumbas na Pinakamahusay at may literal na paliwanag na Napaka kasiya-siya. Samakatuwid pinakamahusay at higit na mahusay ang Antas ng pagganap ng mga mag-aaral batay sa metakognisyon.

Batay sa datos na nakalap, napaka kasiya-siya ang pagganap ng mga mag-aaral batay sa metakognisyon.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na sa pagsulat ng isang sulatin mayroon iba't ibang kakayahan ang mga mag-aaral na mag-isip tungkol sa kaniyang sariling pagkatuto. Ito ay isang mahalagang kasanayan sa pag-aaral dahil ito ay nagbibigay-daan sa isang mag-aaral na magpakadalubhasa sa isang partikular na larangan.

Sa kabuoang isang daan at walumpu't anim na tagatugon, ang marka na "26 - 30" ay nakakuha ng pinakamataas na bilang na isang daan at animnapu't siyam na (169) o 18% ng kabuoang tumugon at may mapaglarawang katumbas na Pinakamahusay. Habang ang marka na "21 - 25" ay nakakuha ng bilang na labing lima (15) o 54% ng kabuoang tumugon at may mapaglarawang katumbas na Higit na Mahusay. At ang marka na "16-20" ay nakakuha ng pinakamababang bilang na dalawa (2) o 20% ng kabuoang tumugon at may mapaglarawang katumbas na Mahusay.

Talahanayan bilang 10 ay nagpapakita ng Antas ng pagganap ng mga mag-aaral batay sa kritikal na pag-iisip

Talahanayan 10. Antas ng pagganap ng mga mag-aaral batay sa kritikal na pag-iisip

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
26 – 30	169	18.00	Pinakamahusay
21 – 25	15	54.00	Higit na Mahusay
16 – 20	2	20.00	Mahusay
11 – 15	0	8.00	Di-gaanong mahusay
6 – 10	0	0.00	Di-Mahusay
0 - 5	0	0.00	Di-Lubhang Mahusay
Total	186	100	
Weighted Mean	27.87		
Pinakamababang Marka	20		
Pinakamataas na marka	30		Napaka kasiya-siya
Standard Deviation	2.05		

May kabuoang (Weighted Mean=27.87, SD=2.05) at (pinakamababang marka = 20, pinakamataas na marka = 30) ipinapakita na ang Antas ng pagganap ng mga mag-aaral batay sa kritikal na pag-iisip ay may mapaglarawang katumbas na Pinakamahusay at may literal na paliwanag na Napaka kasiya-siya. Samakatuwid pinakamahusay, higit na mahusay at mahusay ang Antas ng pagganap ng mga mag-aaral batay sa kritikal na pag-iisip. Batay sa datos na nakalap, napaka kasiya-siya ang pagganap ng mga mag-aaral batay sa kritikal na pag-iisip.

Samakatuwid, pinatutunayan lamang ng mga resulta sa itaas na ang mag-aaral na nagtataglay ng kritikal na pag-iisip ay nakapagtataguyod ng pamumuhay sa mapanuri, makatwiran at mapagmalasakit na paraan. Gumagamit din sila ng mga

kasangkapan, mga konsepto at simulaing nakatutulong sa kanilang makasuri at makapagpaunlad ng kasanayan.

Makabuluhang Ugnayan sa pagganap ng mga Mag-aaral batay sa metakognisyon at kritikal na pag-iisip

Ang pag-aaral na ito ay nagpapakita ng ugnayan sa pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip.

Sa pagkuha ng resulta makikita sa talahanayang ito ang Pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip na kinapapalooban Pagganap, Mean, Computed t-Value, Critical t-value, p-value at Analysis.

Talahanayan 11 ay nagpapakita ng makabuluhang ugnayan sa



pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip.

Talahanayan 11. Makabuluhang Ugnayan sa Pagganap ng mga Mag-aaral batay sa metakognisyon at kritikal na pag-iisip

Pagganap	Mean	Computed t-value	Critical t-value	p-value	Analysis
Metakognisyon	27.63	7.047	1.6531	0.000	Makabuluhan
Kritikal na Pag-iisip	27.87				

Ang datos ay tinuos gamit ang *t-test*. Ang metakognisyon ay ipinares sa kritikal na pag-iisip para makita o malaman ang ugnayan sa pagganap ng mga mag-aaral.

Ang *computed t-value* na 7.047 ay higit na mataas sa *critical t-value* na 1.6531 na mayroong suportang tinuos *p-value* na 0.000, ipinapakita ng datos na may pagtaas sa pagganap ng mag-aaral at ang analisis ay makabuluhan. Base sa datos na nakalap, ipinapakita nito na may makabuluhang pagkakaiba ang antas ng pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip at 0.05 antas ng kabuluhan. At ipinapakita rin nito na ang walang bisang palagay na “Walang makabuluhang ugnayan sa pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip” ay huwag tanggapin, ipinapakita nito na may ugnayan sa pagitan nila.

Samakatuwid may makabuluhang ugnayan sa pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip kung kaya’t naging epektibo ang pagsulat ng reaksyong papel at repleksyong papel bilang kagamitang pampagkatuto.

Makabuluhang Epekto ng Paggamit ng GramaTECHa sa Pagganap ng mga mag-aaral

Ang pag-aaral na ito ay nagpapakita ng makabuluhang epekto ng paggamit ng GramaTECHa sa pagganap ng mga mag-aaral.

Sa pagkuha ng resulta makikita sa talahanayang ito ang paggamit ng GramaTECHa na kinapapalooban ng Kakayahang matuto, Kakayahang umangkop, Kaangkupan sa paggamit, Kapasidad, Aksesibiliti batay sa Metakognisyon at Kritikal na Pag-iisip. Tinuos sa pamamagitan ng Beta, Standard Error, Beta Coefficient, T-Value, at P-Value.

Ang Talahanayang 12 ay nagpapakita ng Makabuluhang epekto ng Paggamit ng GramaTECHa sa pagganap ng mga mag-aaral.

Talahanayan 12. Makabuluhang Epekto ng Paggamit ng GramaTECHa sa Pagganap ng mga Mag-aaral

Metakognisyon	B	SE	B	T	p
Constant	29.03	4.414		6.576*	.000
Kakayahang matuto		.873	-.069	-.08	.937
Kakayahang umangkop		.907	-1.337	-1.473	.143
Kaangkupan sa paggamit		.888	.677	.762	.447
Kapasidad		.984	.283	.288	.774
Aksesibiliti		.919	.145	.158	.875
R-squared			.013		
Adjusted R-squared			-.014		
Standard Error of the Estimate		2.274			
F(5, 180)				.489	.784
Kritikal na pag-iisip	B	SE	B	T	p
Constant	23.71	4.019		5.899	.000
Kakayahang matuto		.795	-.088	-.111	.912
Kakayahang umangkop		.826	-.573	-.693	.489
Kaangkupan sa paggamit		.808	.616	.762	.447
Kapasidad		.896	.564	.629	.53
Aksesibiliti		.837	.347	.414	.679
R-squared			-.012		
Adjusted R-squared			-.015		
Standard Error of the Estimate		2.07			
F(5, 180)				.444	.818

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto sa Paggamit ng GramaTECHa sa pagganap ng mga mag-aaral. Ang *regression model* ay nagpapaliwanag ng 1.3% at 1.2% ng *variance* sa pagganap ng mga mag-aaral (R-squared = 0.013, 0.012). Ang *Kakayahang matuto*, *Kakayahang umangkop*, *Kaangkupan sa paggamit*, *Kapasidad* at *Aksesibiliti* ay walang positibong epekto sa pagganap ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay

hindi makabuluhan (F (5, 180) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Ipinapakita na ang Paggamit ng GramaTECHa batay sa kakayang matuto, kakayahang umangkop, kaangkupan sa



paggamit, kapasidad, at aksesibiliti ay walang positibong epekto sa resulta ng pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip.

Samakatuwid humanap at mag-isip ng ibang alternatibong gawain upang magkaroon ng makabuluhang epekto sa Paggamit ng gramaTECHa sa pagganap ng mga mag-aaral.

Makabuluhang Epekto ng Panturo sa Kasanayang Panggramatika sa Pagganap ng mga Mag-aaral

Ang pag-aaral na ito ay nagpapakita ng makabuluhang epekto Ang Talahanayang 13 ay nagpapakita ng Makabuluhang epekto ng Panturo sa Kasanayang Panggramatika sa resulta ng pagganap ng mga mag-aaral.

Talahanayan 13.Makabuluhang Epekto ng Panturo sa Kasanayang Panggramatika sa Pagganap ng mga Mag-aaral

Metakognisyon	B	SE	B	T	p
Constant	25.31	4.349		5.82	3E-08
Pasulat na Pabaybay		1.023	0.297	0.29	0.772
Pagpili ng mga salita		0.851	0.089	0.105	0.916
Wastong gamit ng mga salita		0.908	0.095	0.104	0.917
R-squared			.002		
Adjusted R-squared			-.015		
Standard Error of the Estimate		2.274			
F(3, 182)				.103	.958
Kritikal na pag-iisip	B	SE	β	T	p
Constant	20.02	3.892		5.143	7E-07
Pasulat na Pabaybay		0.916	1.872	2.044	0.042
Pagpili ng mga salita		0.762	-0.788	-1.035	0.302
Wastong gamit ng mga salita		0.813	0.531	0.654	0.514
R-squared			.034		
Adjusted R-squared			.018		
Standard Error of the Estimate		2.036			
F(3, 182)				2.14	0.097

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto ng Panturo sa Kasanayang Panggramatika sa resulta ng pagganap ng mga mag-aaral. Ang *regression model* ay nagpapaliwanag ng 1.3% at 1.2% ng *variance* sa pagganap ng mga mag-aaral (R-squared = 0.013, 0.012). Ang *Pasulat na Pabaybay, Pagpili ng mga salita at Wastong gamit ng salita* ay walang positibong epekto sa pagganap ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan (F (3, 182) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Ipinapakita na ang panturo sa kasanayang panggramatika batay sa pasulat na pabaybay, pagpili ng mga salita at wastong gamit ng mga salita ay walang positibong epekto sa resulta ng pagganap ng mga mag-aaral batay sa metakognisyon. Ipinapakita rin na ang pagpili ng mga salita at wastong gamit ng mga salita ay walang positibong epekto sa resulta ng

pagganap ng mga mag-aaral batay sa kritikal na pag-iisip, samantalang ang kasanayang panggramatika batay sa pasulat na pabaybay ay may positibong epekto sa resulta ng pagganap ng mga mag-aaral batay sa kritikal na pag-iisip. Samakatuwid gumamit ng ibang alternatibong gawain upang magkaroon ng

ng panturo sa kasanayang panggramatika sa pagganap ng mga mag-aaral.

Sa pagkuha ng resulta makikita sa talahanayang ito ang panturo sa kasanayang panggramatika na kinapapalooban ng Pagsulat na Pabaybay, Pagpili ng mga Salita at Wastong Gamit ng mga Salita batay sa Metakognisyon at Kritikal na Pag-iisip. Tinuon sa pamamagitan ng Beta, Standard Error, Beta Coefficient, T-Value, at P-Value.

makabuluhang epekto ng panturo sa kasanayang panggramatika sa resulta ng pagganap ng mga mag-aaral.

Planong gawain na nais imungkahi matapos ang pag-aanalisa ng pag-aaral

Ang pag-aaral na ito ay nagpapakita ng planong gawain na nais imungkahi matapos ang pag-aanalisa ng pag-aaral.

Sa pagbuo ng plano makikita sa talahanayang ito ang Layunin, Istratehiya o Gawain, Tiyak na Gawain, Taong Kasangkot at Panahon ng Pagsasagawa.



Layunin	Istratehiya/Gawain	Tiyak na Gawain	Taong Kasangkot	Panahon ng Pagsasagawa
Nabibigyang lunas ang mga mag-aaral na may kahinaan sa kasanayang panggramatika.	Paunang Pagtataya	Pagbibigay ng panimulang pagtataya at pagsusulit para matukoy ang kaantasan ng mga mag-aaral.	Mga Guro sa Filipino Mga mag-aaral	Setyembre 2024 – Enero 2025
Napabubuti ang kakayahan ng mga mag-aaral na hindi bihasa sa pagsulat sanaysay gamit ang wastong gramatika.	Suriin ang kakayahan ng mga mag-aaral batay sa maling paggamit ng salita, pagkukulang at pag-uulit ng mga salita.	Pagbibigay ng mga tanong na tataya sa antas ng pag-unawa ng mga mag-aaral. Ilista ang pag-unlad ng mga mag-aaral. Magsagawa ng patuloy na pagsubaybay sa mga mag-aaral lalo na ang mga mag-aaral na mahina sa gramatika.	Mga guro sa Filipino Piling mag-aaral na hindi bihasa sa pagsulat ng sanaysay	Setyembre 2024 – Enero 2025
Nahahasa ang kasanayang paggramatika ng mga mag-aaral na marurunong, mahihina, at hindi bihasa sa gramatika.	Pagsasagawa ng mga sesyon at pagsulat na makapagpapahusa y sa kasanayan ng mga mag-aaral.	Ang mga guro ay magsasagawa ng “Grammar Enhancement” at maglalaan ng oras para maisagawa ang gawain. Pagplano at pagdisenyo ng mga gamit sa pagtuturo sa gramatika na angkop sa antas ng mga mag-aaral. Pagpapatibay na mga materyales sa gramatika.	Mga Guro, dalubguro at ulongguro.	Setyembre 2024 – Enero 2025
Nakapagsasagawa ng mga pagpupulong at (SLAC) sesyon upang matulungan ang mga guro sa Filipino, mga gurong nagtuturo ng Filipino kahit hindi ito ang kanilang pinagkadalubhasaan.	Ang mga guro ay magkakaroon ng kamalayan at maraming kaalaman sa pagtuturo ng mga aralin.	School Learning Action Cell (SLAC)	Mga Guro	Setyembre 2024 – Enero 2025
Nahahasa ang kasanayan ng mga guro sa pagtuturo ng Asignaturang Filipino.	Pangasiwaan ng tagapag-ugnay sa Filipino, dalubguro, at iba pang dalubhasa sa Asignatura.	Paghahanda ng makabagong kagamitang panturo.	Mga Guro	Setyembre 2024 – Enero 2025

4. KONKLUSYON AT REKOMENDASYON

Sa pagbibigay-linaw ng lagom ng mga natuklasan, ang mga sumusunod na konklusyon ay nabuo:

1. Ang haypotesis na nagsasabing “Walang makabuluhang ugnayan sa pagganap ng mga mag-aaral batay sa metakognisyon at kritikal na pag-iisip” ay huwag tanggapin.

2. Ang haypotesis na nagsasabing “walang makabuluhang epekto ang paggamit ng gramaTECHa batay sa kakayang matuto, kakayahang umangkop, kaangkupan sa paggamit, kapasidad at aksesibiliti” ay tanggap. Samakatuwid magsagawa ng mga pagsasanay at seminar para sa mga guro upang mapalawak ang kanilang kaalaman sa mga alternatibong gawain.



3. Ang haypotesis na nagsasabing “walang makabuluhang epekto ang pagpapaunlad sa kasanayang panggramatika batay sa pasulat na pabaybay, pagpili ng mga salita at wastong gamit ng salita sa pagganap ng mga mag-aaral” ay tanggap. Samakatuwid subukan gumamit ng iba’t ibang alternatibong gawain.

Batay sa mga natuklasan at konklusyon nabuo, ang mga sumusunod ay inirekomenda:

1. Ang mga administrador ng paaralan at mga guro sa Filipino ay hinihikayat na gamitin ang GramaTECHa gamit ang iba’t ibang paraan ng pagkatuto ng akademikong sulatin upang higit na matuto at mahikayat ang mga mag-aaral sa pagganap ng mga ito sa kanilang gawaing pang-akademiko.
2. Ang mga guro ay maaari pang paunlarin ang GramaTECHa na makatutulong sa pagpapaunlad ng pagkatuto ng mga mag-aaral tungo sa isang makabuluhang pagganap.
3. Ang mga mag-aaral ay marapat na bigyang-pansin ang kanilang kawilihan at paunlarin ang kanilang abilidad at pagpupursigi para sa pansariling pagkatuto sa paggamit ng GramaTECHa. Ang pagkatuto ng mga mag-aaral ay nakabatay sa kanilang kakayahang matuto kung kaya’t marapat na maging responsable ang mga ito sa kanilang pagpoproseso ng mga impormasyon upang mas maging ganap ang pagkatuto.

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PONAYAN BILANG INTERBENSYON SA KASANAYAN SA GAWAING PAGBASA AT PAGPAPALAWAK NG KAALAMAN SA KARUNUNGANG BAYAN

Mischelle P. Carreos

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pangunahing layunin ng pag-aaral na ito ay bumuo ng isang polyeto na naglalaman ng mga karunungan bayan, na siyang magiging interbensyon sa pagpapabasa kasabay ang pagkatuto ng mga karunungan bayan. Layunin din ng pag-aaral na ito na malaman kung may makabuluhang epekto ba ang PONAYAN bilang Interbensyon sa Gawaing Pagbasa at Kaalaman sa Karunungan bayan sa Pagganap ng mga Mag-aaral sa lahat ng antas ng Santa Cruz Integrated National High School Brgy. Gatid Extension School.

Ang PONAYAN bilang materyal ay nabuo at ginamit ng mananaliksik sa dalawandaan at tatlumpu't isang (231) mag-aaral sa lahat ng antas ng Santa Cruz Integrated National High School Brgy. Gatid Extension School. Napiling tagatugon ay mula Baitang 7 Aster at Dafodil, 8 Amethyst at Bloodstone, 9 Orion at Nebula at Baitang 10 Anahaw at Almaciga. Purposive Sampling ang ginamit na teknik ng mananaliksik. Ang mananaliksik ay gumamit ng Deskriptibong Pamamaraan (Descriptive Method). Ang mga talatanungan, polyeto at materyal ay ginamit upang masagot ang nasabing pananaliksik.

Lumabas sa resulta ng pag-aaral na ito na ang ang Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa ng mga Mag-aaral batay sa Panimula, Pagpapaunlad, Pagpapalihan at Paglalapat gayundin sa Antas ng Pagpapalawak sa Kaalaman sa Karunungan bayan batay sa Pagpapahalaga, Imahinasyon, Kasanayan, at Kultura lahat ay katanggap-tanggap sa kabuuan ito ay may puna na lubos na sumasang-ayon at literal na paliwanag na "lubhang mataas.

Ang resulta ng pagganap ng mga mag-aaral batay sa Mapanuring Pag-iisip at Pag-aanalisa ay may mapaglarawang katumbas na Higit na Mahusay at may literal na paliwanag na Kasiya-siya.

Sa kabuuan, ang haypotesis na "Walang makabuluhang epekto ang PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa sa Pagganap ng mga Mag-aaral" ay tanggap base sa resulta ng bawat suliraning inilalahad.

Sa haypotesis naman na "Walang Makabuluhang Epekto ang Pagpapalawak ng Kaalaman sa Karunungan Bayan sa pagganap ng mga mag-aaral" ay tanggap at ipinapakita nito na "walang makabuluhang" epekto sa pagitan nila.

Batay sa resulta ng pananaliksik na ito, iminumungkahi sa mga guro na payabungin, ayusin ang nabuong polyeto, dagdagan pa ang mga halimbawa, bigyan ng karagdagan pagsusuri at rebisyon. Hinihikayat ng mananaliksik ang mga mag-aaral na bigyang interes ang pagbabasa at umanap ng mga interbensyonal na kagamitang pagbasa upang matugunan ang suliranin sa pagbasa. Para sa mga namumuno sa paaralan, naw'a'y patuloy na suportahan mga guro na bumubuo ng isang kagamitang interbensyon upang maging maayos at umunlad pa ang mga materyal sa pagbasa at dagdagan ang mga impormasyon nang maging epektibo ang materyal. Para sa mga mambabasa, magkaroon ng higit na kasanayan sa pagbasa, gumamit ng materyal na makapagpapataas ng perormans. Sa mga susunod na mananaliksik maaring maging sanligan ang pag-aaral na ito, maaring ayusin ang mga nakapaloob sa polyeto, palawakin pa ang mga baryabol na ginamit, at pumili ng karapat-dapat na maging tagatugon sa pananaliksik.

SUSING SALITA: PONAYAN; Kasanayan; Gawaing Pagbasa

1. PANIMULA

Ang pagbasa ay ang pagkilala at pagkuha ng mga ideya at kaisipan sa mga sagisag na nakalimbag upang mabigkas nang pasalita. Ito ay mahalagang kasanayan ng isang mag-aaral o kahit na sinoman. Sa kasalukuyan mababatid ang suliraning kinahaharap sa makro kasanayang pagbasa ng mga mag-aaral.

Ayon kay Suwanaroa (2021), ang damdamin ng mga estudyante, suporta mula sa pamilya, at paraan ng pagtuturo at pag-aaral sa silid-aralan ay mga pangunahing kadahilanan na nakakaapekto sa kakayahan ng mga mag-aaral na mag-unawa sa pagbasa. Ang mga pang-agham at kaisipang pangwika tulad ng pagtalunton ng wika, kamalayan sa tunog ng mga salita, kamalayan sa morpolohiya, kaalaman sa mga salita, at bokabularyo ay ilan sa nakakaapekto sa pag-unawa ng mga mag-aaral sa pagbasa.

Ayon sa datos ng Program for International Student Assessment (2018), na ang Pilipinas ay may pinakamababa sa mga tuntunin ng pang-unawa sa pagbasa na may 340 puntos mula sa mga pamantayang: pag-unawa, paggamit, pagsusuri, pagninilay-nilay at pakikipag-ugnayan sa mga teksto upang makamit ang mga layunin.

Mababatid ang napakalaking problema ng mga mag-aaral sa pagbasa. Mula sa elementarya hanggang sekondarya ay kapansin-pansin ang tila pagbaba ng kapasidad nilang bumasa. Sa ngayon, maraming nahihirapan sa pag-unawa ng mga binabasa nila dahil sa kakulangan sa pokus at hindi isinasaalang alang ang oras na dapat ay inilalaan sa pagbasa.

Ayon kay Llaneta (2020), ang karunungan-bayan ay napakahalaga sa isang komunidad hindi lamang dahil ito'y naglalaman ng mahahalagang aral kundi dahil ito rin ang



naglalarawan at naglilingang ng kultura at tradisyon ng isang lugar. Ngunit isa sa pangunahing hamon sa edukasyon ngayon ay ang pagkawala ng moral at espiritwal na pag-uugali ng mga kabataan. Kaya't napakahalaga na maipamana sa bagong henerasyon ang mga kaugalian at prinsipyong iniwan ng ating mga ninuno upang hindi ito magdulot ng dagdag na suliranin sa ating lipunan.

Batay sa pag-aaral niya, ang mga karunungang bayan ay isang mahalagang pamana sa atin. Kung kaya't kinakailangan na pagtuunan ng pansin ang sarili nating karunungang bayan nang sa gayon ay hindi malimutan hangang sa susunod pang henerasyon.

Ang pagkakaroon ng maraming uri ng mga materyales sa pagbabasa ay may mahalagang papel sa pagpapalaganap at pagpapalalim ng kahalagahan ng pagbabasa. Ang iba't ibang uri ng materyales sa pagbabasa tulad ng aklat, magasin, dyornal, akademikong babasahin, blogs, polyeto at iba pa ay nagbibigay daan sa iba't ibang mga kaalaman, ideya, at pananaw.

Sa kabuuan, ang pananaliksik na ito ay pumapatungkol sa PONAYAN na ibig sabihin ay isang polyetong naglalaman ng mga karunungang bayan bilang interbensyon sa kasanayan sa gawaing pagbasa at layunin din nitong mapalawak ang kaalaman ng mga mag-aaral sa pamana ng ating mga ninuno ang mga karunungang bayan.

1.1 Paglalahad ng Suliranin

Ninanis din ng pananaliksik na ito na mabatid ang mga kasagutan sa mga piling katanungan:

1. Ano ang antas ng paggamit ng PONAYAN bilang interbensyon sa kasanayan sa gawaing pagbasa batay sa:

- 1.1 Panimula;
- 1.2 Pagpapaunlad;
- 1.3 Pagpapalihan; at
- 1.4 Paglalapat?

2. Ano ang antas ng pagpapalawak sa kaalaman sa karunungang bayan batay sa:

- 2.1 Pagpapahalaga;
- 2.2 Imahinasyon;
- 2.3 Kasanayan; at
- 2.4 Kultura?

3. Ano ang resulta ng pagganap ng mga mag-aaral batay sa:

- 3.1 Mapanuring Pag-iisip; at
- 3.2 Pag-aanalisa?

4. May makabuluhang epekto ba ang PONAYAN bilang Interbensyon sa kasanayan sa gawaing pagbasa sa pagganap ng mga mag-aaral?

5. May makabuluhang epekto ba ng pagpapalawak ng kaalaman sa karunungang bayan sa pagganap ng mga mag-aaral?

6. Anong planong gawain ang iminumungkahi batay sa resulta ng pagsusuri?

2. METODOLOHIYA NG PANANALIKSIK

Sa pag-aaral na ito ang mananaliksik ay gumamit ng Deskriptibong Pamamaraan (Descriptive Method) upang maipakita ang detalyadong konklusyon sa haypotesis o hinuha sa pamamagitan ng masinsinang pag-aaral at tamang interpretasyon.

Ito ay naglalayong mangalap ng mabibilang na datos para sa istatistikal na pagsusuri ng sample ng populasyon. Lalo't higit ang mga impormasyong kinakailangan higgil sa PONAYAN Bilang Interbensyon na Kasanayan sa Gawaing Pagbasa at Pagpapalawak ng Kaalaman sa Karunungang-bayan.

Hinggil sa pag-aaral ni De Belen (2016), ang descriptive research method ay nakapokus sa pagkolekta, pag-anaalisa ng datos sa isang pag-aaral o serye ng pag-aaral. Layunin din nito ang wasto at sistematikong paglalarawan sa isang populasyon, sitwasyon at phenomena.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay nagpapakita ng mga resulta, presentasyon, analisis at interpretasyon ng datos. Ang lahat ng mga tiyak na tanong sa Kabanata 1 sa ilalim ng paglalahad ng suliranin ay sinagot sa kabanatang ito at sinusuportahan ng mga grapikong representasyon o talahanayan.

Batay sa mga tanong at mga hinuha ng pag-aaral na ito, ang estatistika ay inilapat base sa talatanungang ibinigay na may kaugnayan sa pag-aaral patungkol sa PoNaYan bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa at Pagpapalawak ng Kaalaman sa Karunungang bayan.

Ang mga datos na ipinakita ay nakaayos ayon sa pagkakasunod-sunod sa paglalahad ng suliranin.

Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa

Ang pag-aaral na ito ay naglalaman ng antas ng paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Panimula, Pagpapaunlad, Pagpapalihan at Paglalapat.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Pahayag, Mean at Standard Deviation, Puna at Berbal na Interpretasyon upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Sa unang pahayag na "Nauunawaan kaagad ang mga nilalaman ng binasa" ay nakakuha ng mean iskor na 4.40 at standard deviation na 0.64 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Nangangahulugan lamang, na lubos sumasang-ayon ang mga tagatugon na nauunawaan kaagad ang nilalaman kapag binasa. Mabatid sa Talahanayan 1 na ang antas ng paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa ayon sa Panimula.



Talahanayan 1

Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Panimula

Mga Pahayag	Mean	SD	Puna
<i>Nauunawaan kaagad ang mga nilalaman ng binasa.</i>	4.40	0.64	Lubos na Sumasang-ayon
<i>Nakapupukaw ng atensyon ang mga babasahing patungkol sa karununganang bayan.</i>	4.29	0.79	Lubos na Sumasang-ayon
<i>Naibabahagi sa simula ang mga dapat asahan sa aming babasahing polyeto.</i>	4.07	0.87	Sumasang-ayon
<i>Nakaaakit ang mga gawaing nakapaloob sa simulang bahagi ng polyeto.</i>	4.34	0.86	Lubos na Sumasang-ayon
<i>Naipaliliwanag ang kahalagahan ng babasahin sa simula pa lamang ng pagbabasa.</i>	4.50	0.69	Lubos na Sumasang-ayon

Overall Mean: 4.32

Standard Deviation: 0.49

Literal na paliwanag: Lubhang Mataas

Sa ikalawang pahayag na “*Nakapupukaw ng atensyon ang mga babasahing patungkol sa karununganang bayan,*” ay nakakuha ng mean iskor na 4.29 at standard deviation na 0.79 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon ang mga tagatugon na nakapupukaw ng atensyon ang mga babasahing patungkol sa karununganang bayan.

Sa ikatlong pahayag na “*Naibabahagi sa simula ang mga dapat asahan sa aming babasahing polyeto.*” ay nakakuha ng mean iskor na 4.07 at standard deviation na 0.87 na may deskripsyon na lubhang mataas at puna na sumasang-ayon. Ibig sabihin naibabahagi sa simula ang mga dapat asahan sa babasahing polyeto.

Sa ikaapat na pahayag na “*Nakaaakit ang mga gawaing nakapaloob sa simulang bahagi ng polyeto.*” ay nakakuha ng mean iskor na 4.34 at standard deviation na 0.86 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Kaya’t nangangahulugan lamang itong nakaaakit ang mga gawaing nakapaloob sa simulang bahagi ng polyeto.

At sa ikalimang pahayag na “*Naipaliliwanag ang kahalagahan ng babasahin sa simula pa lamang ng pagbabasa.*” Ito’y nakakuha ng mean iskor na 4.50 at standard deviation na 0.69 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nito ay naipaliliwanag ang

kahalagahan ng babasahin sa simula pa lamang ng pagbabasa.

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang dalawandaan at tatlumpu’t isang mag-aaral ng Santa Cruz Integrated National High School-Brgy. Gatid Extension School at ang mga datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas.”

Sa kabuuan, ito ay may kabuuang mean na 4.32 standard deviation na 0.49 at ipinapakita na ang Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Panimula ay may puna na Lubos na Sumasang-ayon at may literal na paliwanag na Lubhang Mataas. Ibig sabihin lamang nito na ang mga resulta sa itaas ay maayos at mainam na magkaroon ng makabuluhan at madaling maunawaan na panimula na nakakaganyak sa isang talakayan lalo’t higit sa pagpapabasa. Makatutulong ito upang ipaalam sa mga mag-aaral ang nais tunguhin ng isang babasahin katulad ng isang polyeto.

Makikita sa Talahanayan 2 na Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Pagpapaunlad.

Talahanayan 2

Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Pagpapaunlad

Mga Pahayag	Mean	SD	Puna
<i>Napabubuti ang kasanayan sa pagbabasa matapos gamitin ang polyeto na may iba’t ibang karununganang bayan.</i>	4.42	0.65	Lubos na Sumasang-ayon
<i>Nagkararoon ng makabuluhang papel ang pagbabasa ng karununganang bayan sa personal at intelektwal na pag-unlad.</i>	4.20	0.76	Sumasang-ayon
<i>Nakatutulong ang polyeto na may iba’t ibang karununganang bayan upang magbasa nang mas mabilis at mas mahusay.</i>	4.50	0.66	Lubos na Sumasang-ayon
<i>Nakakuha ng mas mahusay na mga kasanayang kritikal na pagsusuri para sa mga teksto matapos gamitin ang polyeto.</i>	4.33	0.62	Lubos na Sumasang-ayon



Nagkakaroon ng pag-unlad sa aking kaalaman sa iba't ibang uri ng karunungan bayan. 4.44 0.84 Lubos na Sumasang-ayon

Overall Mean: 4.38

Standard Deviation: 0.46

Literal na paliwanag: Lubhang Mataas

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang dalawandaan at tatlumpu't isang mag-aaral ng Santa Cruz Integrated National High School-Brgy. Gatid Extension School at ang mga datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang "Lubhang Mataas".

Sa unang pahayag na "Napabubuti ang kasanayan sa pagbabasa matapos gamitin ang polyeto na may iba't ibang karunungan bayan." Ay nakakuha ng mean iskor na 4.42 at standard deviation na 0.65 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na napabubuti ang kasanayan sa pagbabasa matapos gamitin ang polyeto na may iba't ibang karunungan bayan.

Sa ikalawang pahayag na "Nagkakaroon ng makabuluhang papel ang pagbabasa ng karunungan bayan sa personal at intelektwal na pag-unlad." Ay nakakuha ng mean iskor na 4.20 at standard deviation na 0.76 na may deskripsyon na lubhang mataas at puna na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nagkakaroon ng makabuluhang papel ang pagbabasa ng karunungan bayan sa personal at intelektwal na pag-unlad.

Sa ikatlong pahayag na "Nakatutulong ang polyeto na may iba't ibang karunungan bayan upang magbasa nang mas mabilis at mas mahusay." ay nakakuha ng mean iskor na 4.50 at standard deviation na 0.66 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nakatutulong ang polyeto na may iba't ibang karunungan bayan upang magbasa nang mas mabilis at mas mahusay.

Sa ikaapat na pahayag na "Nakakukuha ng mas mahusay na

mga kasanayang kritikal na pagsusuri para sa mga teksto matapos gamitin ang polyeto." ay nakakuha ng mean iskor na 4.33 at standard deviation na 0.62 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nakakukuha ng mas mahusay na mga kasanayang kritikal na pagsusuri para sa mga teksto matapos gamitin ang polyeto.

Sa ikalimang pahayag na "Nagkakaroon ng pag-unlad sa aking kaalaman sa iba't ibang uri ng karunungan bayan." ay nakakuha ng mean iskor na 4.44 at standard deviation na 0.84 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nagkakaroon ng pag-unlad sa kaalaman sa iba't ibang uri ng karunungan bayan.

Sinasabi sa mga pahayag sa itaas na ito ay may kabuoang mean na 4.38 at standard deviation na 0.46 at ipinahihiwatig ng Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Pagpapaunlad ay may puna na Lubos na Sumasang-ayon at literal na paliwanag na Lubhang Mataas.

Ibig sabihin lamang nito na batay sa resulta sa itaas na malaki ang ginagampanan sa isang babasahin na kinakailangang ang talakayan ay akmang akma at mapauunlad nang lubusan ang pag-iisip ng mga mag-aaral lalo't higit sa mga paksa patungkol sa karunungan bayan. Dahil dito'y lubusang nauunawaan ng mga mag-aaral ang isang babasahin batay sa pagpapaunlad na inilaman sa polyeto.

Makikita sa Talahanayan 3 na Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Pagpapalihan.

Talahanayan 3

Antas ng paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Pagpapalihan

Mga Pahayag	Mean	SD	Puna
Kasiya-siyang nakapaglalaan ng oras sa pagbabasa ng mga aktibidad sa polyeto.	4.46	0.71	Lubos na Sumasang-ayon
Nakarerelaks ang pagbabasa at mas nauunawaan ang karunungan bayan dahil sa iba't ibang gawain.	4.44	0.65	Lubos na Sumasang-ayon
Nakalilibang ang pagbabasa ng polyeto na ginamit.	4.39	0.68	Lubos na Sumasang-ayon
Kasiya-siyang ibahagi sa iba ang mga karunungan bayan.	4.38	0.88	Lubos na Sumasang-ayon
Nakasasali sa pagbabasa para sa paglilibang o pansariling kasiyahan	4.15	0.84	Sumasang-ayon

Overall Mean: 4.37

Standard Deviation: 0.50

Literal na paliwanag: Lubhang Mataas



Sa unang pahayag na “*Kasiya-siyang nakapaglalaan ng oras sa pagbabasa ng mga aktibidad sa polyeto.*” ay nakakuha ng mean iskor na 4.46 at standard deviation na 0.71 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na kasiya-siyang nakapaglalaan ng oras sa pagbasa ng mga aktibidad sa polyeto.

Sa ikalawang pahayag na “*Nakarerelaks ang pagbabasa at mas nauunawaan ang karunungan bayan dahil sa iba’t ibang gawain.*” ay nakakuha ng mean iskor na 4.44 at standard deviation na 0.65 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nakarerelaks ang pagbabasa at mas nauunawaan ang karunungan bayan dahil sa iba’t ibang gawain.

Sa ikatlong pahayag na “*Nakalilibang ang pagbabasa ng polyeto na ginamit.*” ay nakakuha ng mean iskor na 4.39 at standard deviation na 0.68 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nakalilibang ang pagbabasa ng polyeto.

Sa ikaapat na pahayag na “*Kasiya-siyang ibahagi sa iba ang mga karunungan bayan.*” ay nakakuha ng mean iskor na 4.38 at standard deviation na 0.88 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na kasiya-siyang ibahagi sa iba ang mga karunungan bayan

Sa huling pahayag na “*Nakasasali sa pagbabasa para sa paglilibang o pansariling kasiyahan.*” ay nakakuha ng mean iskor na 4.15 at standard deviation na 0.84 na may deskripsyon na lubhang mataas at puna na sumasang-ayon.

Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nakasasali sa pagbabasa upang makapaglibang para sa pansariling kasiyahan.

Mabatid sa mga pahayag sa itaas na ito ay may kabuoang mean na 4.37 at standard deviation na 0.50 at ipinahihiwatig ng Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Pagpapalihan ay may puna na Lubos na Sumasang-ayon at literal na paliwanag na Lubhang Mataas.

Ibig sabihin lamang nito na batay sa resulta sa itaas na kinakailangang magkaroon ng iba’t ibang aktibidad na kawiwilihan ng mga mag-aaral. Mas lalong nauunawaan ang mga tinatalakay kapag mayroong iba’t ibang estratehiya sa mga gawain. Mas napalalawak ang kanilang imahinasyon at kaalaman dahil sa mga ginawang pagpapalihan sa polyeto.

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang dalawandaan at tatlumpu’t isang mag-aaral ng Santa Cruz Integrated National High School-Brgy. Gatid Extension School at ang mga datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas”.

Sa unang pahayag na “*Nauunawaan at natatandaan ang mga pangunahing ideya mula sa nabasang mga karunungan bayan.*” ay nakakuha ng mean iskor na 4.27 at standard deviation na 0.74 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nauunawaan at natatandaan ang mga pangunahing ideya mula sa nabasang mga karunungan bayan.

Makikita sa Talahanayan 4 na Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Paglalapat.

Talahanayan 4

Antas ng Paggamit ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Paglalapat

Mga Pahayag	Mean	SD	Puna
<i>Nauunawaan at natatandaan ang mga pangunahing ideya mula sa nabasang mga karunungan bayan.</i>	4.27	0.74	Lubos na Sumasang-ayon
<i>Nagagawang ikonekta ang bagong impormasyon mula sa pagbabasa sa umiiral na kaalaman at karanasan.</i>	4.28	0.80	Lubos na Sumasang-ayon
<i>Naiiugnay ang mga impormasyon sa totoong sitwasyon o isyu sa mundo.</i>	4.11	0.87	Sumasang-ayon
<i>Nakakikita ng mga estratehiya o pamamaraan na kailangan pagbutihin sa kasanayang pagbasa.</i>	4.28	0.71	Lubos na Sumasang-ayon
<i>Nagagamit ang mga impormasyong nakakuha mula sa pagbabasa upang malutas ang mga problema o gumawa ng mga desisyon.</i>	4.36	0.68	Lubos na Sumasang-ayon

Overall Mean: 4.26

Standard Deviation: 0.52

Literal na paliwanag: Lubhang Mataas

Sa ikalawang pahayag na “*Nagagawang ikonekta ang bagong impormasyon mula sa pagbabasa sa umiiral na kaalaman at karanasan.*” ay nakakuha ng mean iskor na 4.28 at standard

deviation na 0.80 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nagagawang



ikonecta ang bagong impormasyon mula sa pagbasa sa umiiral na kaalaman at karanasan.

Sa ikatlong pahayag na “*Naiuugnay ang mga impormasyon sa totoong sitwasyon o isyu sa mundo.*” ay nakakuha ng mean iskor na 4.11 at standard deviation na 0.87 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon na naiuugnay ang mga impormasyon sa totoong sitwasyon o isyu sa mundo.

Sa ikaapat na pahayag na “*Nakakikita ng mga estratehiya o pamamaraan na kailangan pagbutihin sa kasanayang pagbasa.*” ay nakakuha ng mean iskor na 4.28 at standard deviation na 0.71 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nakakikita ng mga estratehiya o pamamaraan na kailangan pagbutihin sa kasanayang pagbasa.

Sa huling pahayag na “*Nagagamit ang mga impormasyong nakukuha mula sa pagbabasa upang malutas ang mga problema o gumawa ng mga desisyon.*” ay nakakuha ng mean iskor na 4.36 at standard deviation na 0.68 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na lubos na sumasang-ayon ang mga tagatugon na nagagamit ang mga impormasyong nakukuha mula sa pagbabasa upang malutas ang mga problema o gumawa ng mga desisyon.

Mababatid sa mga pahayag sa itaas na ito ay may kabuoang mean na 4.26 at standard deviation na 0.52 at ipinahihiwatig ng Antas ng Paggamit ng PONAYAN Bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa batay sa Paglalapat ay may puna na Lubos na Sumasang-ayon at literal na paliwanag na Lubhang Mataas.

Kaugnay ng mga resulta sa itaas, kinakailangang malaman kung may natutuhan ang isang mag-aaral sa isang uri ng babasahin. Kaakibat nito ang parte sa polyeto na paglalapat kung saan makikita ang mga katanungan at pagpapalawak pa sa isang aralin. Nakatutulong ito upang maging mabisa ang pagkatuto ng isang mag-aaral.

Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan

Ang pag-aaral na ito ay naglalaman Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Pagpapahalaga, Imahinasyon, Kasanayan at Kultura.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Pahayag, Mean, Standard Deviation, Puna at Berbal na Mapaglarawang Katumbas upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Makikita sa Talahanayan 5 na Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Pagpapahalaga

Talahanayan 5

Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Pagpapahalaga

Mga Pahayag	Mean	SD	Puna
<i>Napalalawak ng pagbabasa ng karunungan bayan ang pang-unawa sa iba't ibang kultura at pananaw.</i>	4.46	0.64	Lubos na Sumasang-ayon
<i>Nakaiimpluwensya ang mga babasahin na may kaugnayan sa karunungan bayan sa mga pinahalalagahan o pinaniniwalaan.</i>	4.31	0.71	Lubos na Sumasang-ayon
<i>Nagpapatibay ang pagbabasa ng polyeto sa karunungan bayan sa pangangalaga at paggalang sa mga tradisyonal na pinahalalagahan.</i>	4.33	0.66	Lubos na Sumasang-ayon
<i>Namumulat sa pagbabasa ng karunungan bayan ang pagkakaugnay ng mga halaga ng komunidad at kapaligiran.</i>	4.31	0.81	Lubos na Sumasang-ayon
<i>Nabibigyang halaga at importansya ang pangkalahatang nilalaman ng polyeto.</i>	4.40	0.67	Lubos na Sumasang-ayon

Overall Mean: 4.36

Standard Deviation: 0.46

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “*Napalalawak ng pagbabasa ng karunungan bayan ang pang-unawa sa iba't ibang kultura at pananaw.*” ay nakakuha ng mean iskor na 4.46 at standard deviation na 0.64 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang, na lubos sumasang-ayon ang mga tagatugon na napalalawak ng pagbabasa ng karunungan bayan ang pang-unawa sa iba't ibang kultura at pananaw.

Sa ikalawang pahayag na “*Nakaiimpluwensya ang mga babasahin na may kaugnayan sa karunungan bayan sa mga pinahalalagahan o pinaniniwalaan.*” ay nakakuha ng mean iskor na 4.31 at standard deviation na 0.71 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon ang mga tagatugon ibig sabihin talagang nakaiimpluwensya ang mga babasahin na may kaugnayan sa karunungan bayan sa mga pinahalalagahan o pinaniniwalaan.



Sa ikatlong pahayag na “*Nagpapatibay ang pagbabasa ng polyeto sa karunungan bayan sa pangangalaga at paggalang sa mga tradisyonal na pinahahalagahan.*” ay nakakuha ng mean iskor na 4.33 at standard deviation na 0.66 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nagpapatibay ang pagbabasa ng polyeto sa karunungan bayan sa pangangalaga at paggalang sa mga tradisyonal na pinahahalagahan.

Sa ikaapat na pahayag na “*Namumulat sa pagbabasa ng karunungan bayan ang pagkakaugnay ng mga halaga ng komunidad at kapaligiran.*” ay nakakuha ng mean iskor na 4.31 at standard deviation na 0.81 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon . Kaya’t nangangahulugan lamang itong namumulat sa pagbabasa ng karunungan bayan ang pagkakaugnay ng mga halaga ng komunidad at kapaligiran.

At sa ikalimang pahayag na “*Nabibigyang halaga at importansya ang pangkalahatang nilalaman ng polyeto.*” Ito’y nakakuha ng mean iskor na 4.40 at standard deviation na 0.67 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nito ay naipaliliwanag ang kahalagahan ng babasahin sa simula pa lamang ng pagbabasa. Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang dalawandaan at tatlumpu’t isang mag-aaral ng Santa Cruz Integrated National High School-Brgy. Gatid Extension School at ang mga datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas.”

Sa kabuuan, ito ay may kabuuang mean na 4.36 at standard deviation na 0.46 at ipinapakita na ang. Antas ng pagpapalawak sa kaalaman sa karunungan bayan batay sa Pagpapahalaga ay may puna na Lubos na Sumasang-ayon at may literal na paliwanag na Lubhang Mataas.

Batay sa mga resulta sa itaas masasabi ng mananaliksik na kinakailangang mapahalagahan ang ating mga karunungan bayan, sapagkat sa kasalukuyan tila ba nakakalimot ang mga tao lalo’t higit ang mga kabataan sa mga iniambag sa atin ng mga ninuno. Ating pahalagan ang ginawa nilang pagpapayabong sa ating mga panitikan na hanggang sa kasalukuyan ay ating naaral at huwag kalilimutan.

Sa unang pahayag na “*Nakapupukaw ng imahinasyon at nakahihikayat sa malikhaing pag-iisip.*” ay nakakuha ng mean iskor na 4.27 at standard deviation na 0.84 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang, na lubos sumasang-ayon ang mga tagatugon na nakapupukaw ng imahinasyon at nakahihikayat sa malikhaing pag-iisip.

Sa ikalawang pahayag na “*Nakikita ang sarili sa sitwasyon sa mga kuwento o ideya na nabasa.*” ay nakakuha ng mean iskor na 4.17 at standard deviation na 0.75 na may deskripsyon na lubhang mataas at puna na sumasang-ayon ibig sabihin ang mga tagatugon ay nakikita ang sarili sa sitwasyon sa mga kuwento o ideya na nabasa.

Makikita sa Talahanayan 6 ang Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Imahinasyon.

Talahanayan 6

Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Imahinasyon

Mga Pahayag	Mean	SD	Puna
<i>Nakapupukaw ng imahinasyon at nakahihikayat sa malikhaing pag-iisip.</i>	4.27	0.84	Lubos na Sumasang-ayon
<i>Nakikita ang sarili sa sitwasyon sa mga kuwento o ideya na nabasa.</i>	4.17	0.75	Sumasang-ayon
<i>Nakatutulong ang pagbabasa ng polyeto na makita ang mundo mula sa iba’t ibang pananaw at pinahuhusay ang empatiya at pag-unawa.</i>	4.42	0.63	Lubos na Sumasang-ayon
<i>Nahihikayat na gumawa ng isang bagay (hal., sining, kuwento, musika) bilang resulta ng pagbabasa ng polyeto.</i>	4.19	0.79	Sumasang-ayon
<i>Napag-aalaman na mabuo sa isipan ang mga eksena, tauhan, o pangyayaring inilarawan sa mga polyetong binasa.</i>	4.46	0.62	Lubos na Sumasang-ayon

Overall Mean: 4.30

Standard Deviation: 0.47

Literal na paliwanag: Lubhang Mataas

Sa ikatlong pahayag na “*Nakatutulong ang pagbabasa ng polyeto na makita ang mundo mula sa iba’t ibang pananaw at pinahuhusay ang empatiya at pag-unawa.*” ay nakakuha ng mean iskor na 4.42 at standard deviation na 0.63 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nakatutulong ang pagbabasa ng polyeto na makita ang mundo mula sa iba’t ibang pananaw at pinahuhusay ang empatiya at pag-unawa.

Sa ikaapat na pahayag na “*Nahihikayat na gumawa ng isang bagay (hal., sining, kuwento, musika) bilang resulta ng pagbabasa ng polyeto.*” ay nakakuha ng mean iskor na 4.19 at standard deviation na 0.79 na may deskripsyon na lubhang mataas at puna na sumasang-ayon. Kaya’t nangangahulugan lamang itong nahihikayat na gumawa ng isang bagay (hal., sining, kuwento, musika) bilang resulta ng pagbabasa ng polyeto ang mga tagatugon.



Sa huling pahayag na “*Napag-aalaman na mabuo sa isipan ang mga eksena, tauhan, o pangyayaring inilarawan sa mga polyetong binasa.*” Ito’y nakakuha ng mean iskor na 4.46 at standard deviation na 0.62 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nito na napag-aalaman na mabuo sa isipan ang mga eksena, tauhan, o pangyayaring inilarawan sa mga polyetong binasa ng mga mag-aaral.

Sa kabuuan, ito ay may kabuuang mean na 4.30 at standard deviation na 0.47 at ipinapakita na ang Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Imahinasyon ay may puna na Lubos na Sumasang-ayon at may literal na

paliwanag na Lubhang Mataas.

Batay sa kinalabasang resulta sa itaas masasabi ng mananaliksik na ang ginamit ay lubos na nakatulong sa pagpapatalas ng kanilang kaisipan. Iba’t ibang imahinasyon ang kanilang nasasaisip sa tuwing may mga karunungan bayan na tinalakay at pinasagutan sa mga mag-aaral. Dahil dito mas naging malikhain ang kanilang imahinasyon at hindi literal ang kanilang pagpapakahulugan sa mga karunungan bayan.

Makikita sa Talahanayan 7 na Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Kasanayan

Talahanayan 7

Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Kasanayan

Mga Pahayag	Mean	SD	Puna
<i>Nakaguguhit ng mga hinuha at nakagagawa ng mga koneksyon habang nagbabasa.</i>	4.26	0.73	Lubos na Sumasang-ayon
<i>Nakapagsusuri ng kritikal sa teksto.</i>	4.05	0.74	Sumasang-ayon
<i>Napauunlad ang sariling talento sa pagbuo ng karunungan bayan.</i>	4.29	0.78	Lubos na Sumasang-ayon
<i>Nalalaman ang bokabularyo at nakikilala ang mga salita.</i>	4.26	0.80	Lubos na Sumasang-ayon
<i>Nagkakaroon ng kakayahan sa pagbuo ng sariling karunungan bayan.</i>	4.31	0.75	Lubos na Sumasang-ayon

Overall Mean: 4.23

Standard Deviation: 0.50

Literal na paliwanag: Lubhang Mataas

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang dalawandaan at tatlumpu’t isang mag-aaral ng Santa Cruz Integrated National High School-Brgy. Gatid Extension School at ang mga datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas.”

Sa unang pahayag na “*Nakaguguhit ng mga hinuha at nakagagawa ng mga koneksyon habang nagbabasa.*” ay nakakuha ng mean iskor na 4.26 at standard deviation na 0.73 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang, na lubos sumasang-ayon ang mga tagatugon na nakaguguhit ng mga hinuha at nakagagawa ng mga koneksyon habang nagbabasa.

Sa ikalawang pahayag na “*Nakapagsusuri ng kritikal sa teksto.*” ay nakakuha ng mean iskor na 4.05 at standard deviation na 0.74 na may deskripsyon na lubhang mataas at puna na sumasang-ayon ibig sabihin ang mga tagatugon ay nakikita ang sarili sa sitwasyon sa mga kuwento o ideya na nabasa.

Sa ikatlong pahayag na “*Napauunlad ang sariling talento sa pagbuo ng karunungan bayan.*” ay nakakuha ng mean iskor na 4.29 at standard deviation na 0.78 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nakatutulong ang pagbabasa ng polyeto na napauunlad ang sariling talento sa pagbuo ng karunungan bayan.

Sa ikaapat na pahayag na “*Nalalaman ang bokabularyo at*

nakikilala ang mga salita.” ay nakakuha ng mean iskor na 4.26 at standard deviation na 0.80 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Kaya’t nangangahulugan lamang itong nalalaman ang bokabularyo at nakikilala ang mga salita sa isang babasahin.

Sa huling pahayag na “*Nagkakaroon ng kakayahan sa pagbuo ng sariling karunungan bayan.*” Ito’y nakakuha ng mean iskor na 4.31 at standard deviation na 0.75 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nito na nagkakaroon ng kakayahan sa pagbuo ng sariling karunungan bayan.

Sa kabuuan, ito ay may kabuuang mean na 4.23 at standard deviation na 0.50 at ipinapakita na ang Antas ng Pagpapalawak sa Kaalaman sa Karunungan Bayan batay sa Kasanayan ay may puna na Lubos na Sumasang-ayon at may literal na paliwanag na Lubhang Mataas.

Mapapansin sa mga resulta sa itaas na nakatutulong sa pagpapalawak ng kaalaman sa karunungan bayan ang iba’t ibang kasanayan na maaring magawa ng isang mag-aaral. Makabubuo ng iba’t ibang karunungan bayan kung may angking husay ang isang mag-aaral sa pagtuklas at pag-isip ng mga bagay-bagay upang ang mga halimbawa nilang magagawa ay maging makabuluhan.

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang dalawandaan at tatlumpu’t isang mag-aaral ng Santa Cruz Integrated National



High School-Brgy. Gatid Extension School at ang mga datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas”.

Sa unang pahayag na “*Napahahalagahan ang kultura sa pagbasa ng mga karununganang bayan gamit ang polyeto.*” ay nakakuha ng mean iskor na 4.48 at standard deviation na 0.54

na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang, na lubos sumasang-ayon ang mga tagatugon na napahahalagahan ang kultura sa pagbasa ng mga karununganang bayan gamit ang polyeto.

Makikita sa Talahanayan 8 na Antas ng pagpapalawak sa kaalaman sa karununganang bayan batay sa Kultura.

Talahanayan 8

Antas ng Pagpapalawak sa Kaalaman sa Karununganang Bayan batay sa Kultura

Mga Pahayag	Mean	SD	Puna
<i>Napahahalagahan ang kultura sa pagbasa ng mga karununganang bayan gamit ang polyeto.</i>	4.48	0.54	Lubos na Sumasang-ayon
<i>Nagagamit ang polyeto bilang panibagong instrumento sa pagpapalaganap ng kultura sa mambabasa.</i>	4.24	0.72	Lubos na Sumasang-ayon
<i>Nagbibigay ng makabuluhang epekto sa kaalaman sa pagkakaiba-iba ng kultura sa ating bansa.</i>	4.31	0.82	Lubos na Sumasang-ayon
<i>Nauunawaan ang mga kultura at tradisyon sa mga halimbawang karununganang bayan.</i>	4.33	0.70	Lubos na Sumasang-ayon
<i>Naibabahagi ang mga tradisyon at kultura ng mga Pilipino.</i>	4.39	0.92	Lubos na Sumasang-ayon

Overall Mean: 4.35

Standard Deviation: 0.46

Literal na paliwanag: Lubhang Mataas

Sa ikalawang pahayag na “*Nagagamit ang polyeto bilang panibagong instrumento sa pagpapalaganap ng kultura sa mambabasa.*” ay nakakuha ng mean iskor na 4.24 at standard deviation na 0.72 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon ibig sabihin ang mga tagatugon ay nagagamit ang polyeto bilang panibagong instrumento sa pagpapalaganap ng kultura sa mambabasa.

Sa ikatlong pahayag na “*Nagbibigay ng makabuluhang epekto sa kaalaman sa pagkakaiba-iba ng kultura sa ating bansa.*” ay nakakuha ng mean iskor na 4.31 at standard deviation na 0.82 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin ang mga tagatugon ay sinasbing nagbibigay ng makabuluhang epekto sa kaalaman sa pagkakaiba-iba ng kultura sa ating bansa.

Sa ikaapat na pahayag na “*Nauunawaan ang mga kultura at tradisyon sa mga halimbawang karununganang bayan.*” ay nakakuha ng mean iskor na 4.33 at standard deviation na 0.70 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Kaya’t nangangahulugan lamang itong nauunawaan ang mga kultura at tradisyon sa mga halimbawang karununganang bayan.

Sa ikalimang pahayag na “*Naibabahagi ang mga tradisyon at kultura ng mga Pilipino.*” Ito’y nakakuha ng mean iskor na 4.39 at standard deviation na 0.92 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Ibig sabihin nito na naibabahagi ang mga tradisyon at kultura ng mga Pilipino.

Sa kabuuan, ito ay may kabuuang mean na 4.35 at standard deviation na 0.46 at ipinapakita na ang Antas ng Pagpapalawak sa Kaalaman sa Karununganang Bayan batay sa Kultura ay may

puna na Lubos na Sumasang-ayon at may literal na paliwanag na Lubhang Mataas.

Batay mga pahayag at resulta sa itaas malaking impluwensya ang mga karununganang bayan sa ating kultura. Masasabing nagtagumpay ang ating mga ninuno sa pagpapalawig ng iba’t ibang karununganang bayan na hanggang sa kasalukuyan ay napag-aaralan at nalalaman ng mga mag-aaral. Dahil sa mga karununganang bayan ang ating tradisyon at kultura ay hindi na mawawala pagdating sa ganitong uri ng panitikan.

Antas ng Pagganap ng mga Mag-aaral

Ang pag-aaral na ito ay naglalaman ng resulta ng pagganap ng mga mag-aaral batay sa mapanuring pag-iisip at pag-aanalisa.

Sa pagkuha ng resulta, makikita ang mga sumusunod na talahanayang ito ay may Marka, Frequency, Percentage at Pangkalahatang mapaglarawang katumbas. Makikita rin ang Weighted Mean, Pinakamababa’t Pinakamataas na Marka at Standard Deviation upang higit na malaman ang kinalabasan ng pananaliksik.

Ang talahanayan bilang siyam ito’y nagpapakita ng resulta ng pagganap ng mga mag-aaral batay sa Mapanuring Pag-iisip, sa kabuoang dalawang daan at tatlumpu’t-isa na tagatugon, ang marka na “21 to 25” ay nakakuha ng pinakamataas na bilang na isang daan at dalawapu’t-siyam (129) o 55.84% ng kabuoang tumugon at may mapaglarawang katumbas na Higit na Mahusay. Habang ang marka na “16 to 20” ay nakakuha ng pinakamababang bilang na tatlumpu’t-pito (37) o 16.02% ng kabuoang tumugon at may mapaglarawang katumbas na Mahusay.

Makikita sa Talahanayan 9 ang Resulta ng Pagganap ng mga



Mag-aaral batay sa Mapanuring Pag-iisip.

Talahanayan 9

Resulta ng Pagganap ng mga Mag-aaral batay sa Mapanuring Pag-iisip

Marka	Frequency	Bahagdan	Mapaglarawang Katumbas
26 - 30	65	28.14	Pinakamahusay
21 - 25	129	55.84	Higit na Mahusay
16 - 20	37	16.02	Mahusay
11 - 15	0	0.00	Katamtamang Mahusay
6 - 10	0	0.00	Di-gaanong mahusay
0 - 5	0	0.00	Di-mahusay
Total	231	100	
Weighted Mean	23.55		
Pinakamababang Marka	16		
Pinakamataas na marka	30		Kasiya-siya
Standard Deviation	3.04		

May kabuoang (Weighted Mean = 23.55, SD = 3.04) at (pinakamababang marka = 16, pinakamataas na marka = 30) ipinapakita na ang resulta ng pagganap ng mga mag-aaral batay sa Mapanuring Pag-iisip ay may mapaglarawang katumbas na Pinakamahusay at may literal na paliwanag na Kasiya-siya.

Samakatuwid, ipinakikita ng mga resulta sa itaas na may mga mag-aaral na may kakayahan sa pagbuo ng tula at mayroong ding mag-aaral na lubos na nahihirapan dito. Nasukat ang kanilang mapanuring pag-iisip sa pagbuo ng isang masining na tula. Nababatid ng mga mag-aaral ang mga katangian at elemento na dapat nakapaloob sa isang tula.

Makikita sa Talahanayan 10 ang Resulta ng Pagganap ng mga Mag-aaral batay sa Pag-aanalisa.

Talahanayan 10

Resulta ng Pagganap ng mga Mag-aaral batay sa Pag-aanalisa

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
35 - 40	95	41.13	Pinakamahusay
28 - 34	80	34.63	Higit na mahusay
21 - 27	48	20.78	Mahusay
14 - 20	8	3.46	Katamtamang Mahusay
7 - 13	0	0.00	Di-gaanong Mahusay
0 - 6	0	0.00	Di-mahusay
Total	231	100	
Weighted Mean	32.05		
Pinakamababang Marka	14		
Pinakamataas na marka	40		Kasiya-siya
Standard Deviation	5.87		

Ang talahanayan bilang sampu ay nagpapakita ng resulta ng pagganap ng mga mag-aaral batay sa Pag-aanalisa, sa kabuoang dalawang daan at tatlumpu't-isa na tagatugon, ang marka na "35 to 40" ay nakakuha ng pinakamataas na bilang na siyamnapu at lima (95) o 41.13% ng kabuoang tumugon at may mapaglarawang katumbas na *Pinakamahusay*. Habang ang marka na "14 to 20" ay nakakuha ng pinakamababang bilang na walo (8) o 3.46% ng kabuoang tumugon at may mapaglarawang katumbas na *Katamtamang Mahusay*.

May kabuoang (Weighted Mean = 32.05, SD = 5.87) at (pinakamababang marka = 14, pinakamataas na marka = 40) ipinapakita na ang resulta ng pagganap ng mga mag-aaral batay sa Pag-aanalisa ay may mapaglarawang katumbas na *Higit na mahusay* at may literal na paliwanag na *Kasiya-siya*.

Samakatuwid, batay sa resulta sa itaas ito'y nagpapakita lamang na lubhang naunawaan ng mga mag-aaral ang mga nilalaman patungkol sa karunungan-bayan. Ito'y nagpapakita lamang na naging mabisa ang ginawa ng mananaliksik upang



mas lubos na maunawaan ng mga mag-aaral ang mga nakapaloob sa karunungan bayan na mga bugtong, palaisipan, idyoma, salawikain at kasabihan.

Makabuluhang Epekto ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa sa Pagganap ng mga Mag-aaral

Ang pag-aaral na ito ay nagpapakita ng makabuluhang epekto ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa sa Pagganap ng mga mag-aaral.

Sa pagkuha ng resulta makikita sa talahanayang ito ang PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa na kinapapalooban ng Panimula, Pagpapaunlad, Pagpapalihan, Paglalapat batay sa Mapanuring Pag-iisip at Pag-aanalisa. Tinuos sa pamamagitan ng Beta, Standard Error, Beta Coefficient, T-Value, at P-Value

Ipinapakita ng talahanayan ang resulta ng multiple regression

analysis sa pagsusuri ng epekto ng PONAYAN bilang Interbensyon sa kasanayan sa gawaing pagbasa sa pagganap ng mga mag-aaral. Ang regression model ay nagpapaliwanag ng 2.90% ng variance sa pagganap ng mga mag-aaral (R-squared = 0.029) para sa Mapanuring Pag-iisip at 1.80% ng variance sa pagganap ng mga mag-aaral (R-squared = 0.018) para sa Pag-aanalisa. Ang Panimula, Pagpapaunlad, Pagpapalihan at Paglalapat ay walang epekto sa pagganap ng mga mag-aaral. Ang F-test ng lahat ng modelo ay hindi makabuluhan (F (4, 226) = 1.661 at 1.044, p > 0.05), nagpapahiwatig na ang regression model ay hindi tugma sa mga datos. Ang standard error of the estimate ay 3.025 at 5.869, na sumasalamin sa average deviation sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Makikita sa talahanayan 12 ang akabuluhang epekto ng Ponayan bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa sa Pagganap ng mga Mag-aaral.

Talahanayan 11

Makabuluhang Epekto ng PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa sa Pagganap ng mga Mag-aaral

Mapanuring Pag-iisip	B	SE	β	t	p
Constant	19.16	2.102		9.115*	.000
Panimula		.656	.869	1.325	.186
Pagpapaunlad		.65	.089	.137	.891
Pagpapalihan		.621	-.587	-.946	.345
Paglalatap		.516	.66	1.279	.202
R-squared			.029		
Adjusted R-squared			.010		
Standard Error of the Estimate		3.025			
F(4, 226)				1.661	.16
Pag-aanalisa	B	SE	β	t	p
Constant	27.63	4.077		6.777*	.000
Panimula		1.272	-0.263	-.207	.836
Pagpapaunlad		1.261	-1.002	-.794	.428
Pagpapalihan		1.204	1.182	.982	.327
Paglalatap		1.001	1.124	1.123	.263
R-squared			.018		
Adjusted R-squared			.000		
Standard Error of the Estimate		5.869			
F(4, 226)				1.044	.385

*p < 0.05

At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto ng PONAYAN: Interbensyon sa kasanayan sa gawaing pagbasa sa pagganap ng mga mag-aaral” ay tanggapin at ipinapakita nito na “walang makabuluhang” epekto sa pagitan nila.

Ibig sabihin ang nabuong polyeto na tinatawag na PONAYAN ay hindi naging mabisa bilang interbensyon sa kasanayan sa gawaing pagbasa at pagkatuto ng mga mag-aaral. Marahil ay may kahalintulad na silang nabasa nito o kaya naman ay kailangan pa ring tutukan isa-isa ang bawat mag-aaral nang magkaroon ng makabuluhang epekto sa pagitan nila. Kinakailangan pa ng mas maraming datos o mga impormasyon na makatutulong sa pagpapabasa sa mga mag-aaral.

Makabuluhang Epekto ng Pagpapalawak ng Kaalaman sa Karunungan Bayan sa Pagganap ng mga Mag-aara

Ang pag-aaral na ito ay nagpapakita ng makabuluhang epekto ng Pagpapalawak ng Kaalaman sa Karunungan Bayan sa Pagganap ng mga mag-aaral.

Sa pagkuha ng resulta makikita sa talahanayang ito ang makabuluhang epekto ng Pagpapalawak ng Kaalaman sa Karunungan Bayan na kinapapalooban ng Pagpapahalaga, Imahinasyon, Kasanayan, at Kultura batay sa Mapanuring Pag-iisip at Pag-aanalisa. Tinuos sa pamamagitan ng Beta, Standard Error, Beta Coefficient, T-Value, at P-Value



Ipinapakita ng talahanayan ang resulta ng multiple regression analysis sa pagsusuri ng epekto ng pagpapalawak ng kaalaman sa karunungan bayan sa pagganap ng mga mag-aaral. Ang regression model ay nagpapaliwanag ng 1.10% ng variance sa pagganap ng mga mag-aaral (R-squared = 0.011) para sa Mapanuring Pag-iisip at 1.30% ng variance sa pagganap ng mga mag-aaral (R-squared = 0.013) para sa Pag-aanalisa. Ang Pagpapahalaga, Imahinasyon, Kasanayan at Kultura ay walang epekto sa pagganap ng mga mag-aaral. Ang F-test ng lahat ng

modelo ay hindi makabuluhan ($F(4, 226) = 0.647$ at 0.762 , $p > 0.05$), nagpapahiwatig na ang regression model ay hindi tugma sa mga datos. Ang standard error of the estimate ay 3.052 at 5.883, na sumasalamin sa average deviation sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Makikita sa talahanayan labing dalawa ang makabuluhang epekto ng Pagpapalawak ng Kaalaman sa Karunungan Bayan sa Pagganap ng mga Mag-aaral.

Talananayan 12

Makabuluhang Epekto ng Pagpapalawak ng Kaalaman sa Karunungan Bayan sa Pagganap ng mga Mag-aaral

Mapanuring Pag-iisip	B	SE	β	t	p
Constant	20.02	2.081		9.909*	.000
Pagpapahalaga		.697	-.025	-.036	.971
Imahinasyon		.738	-.102	-.138	.89
Kasanayan		.691	.454	.657	.512
Kultura		.797	.357	.448	.654
R-squared			.011		
Adjusted R-squared			-.006		
Standard Error of the Estimate		3.052			
F(4, 226)				.647	.63
Pag-aanalisa	B	SE	β	t	p
Constant	32.23	4.012		8.033	.000
Pagpapahalaga		1.344	-.118	-.087	.93
Imahinasyon		1.422	-.376	-.265	.791
Kasanayan		1.332	2.205	1.655	.099
Kultura		1.537	-1.694	-1.102	.271
R-squared			.013		
Adjusted R-squared			-.004		
Standard Error of the Estimate		5.883			
F(4, 226)				.762	.551

*p < 0.05

Ipinapakita rin nito na ang walang bisang palagay na “Walang makabuluhang epekto ng pagpapalawak ng kaalaman sa karunungan bayan sa pagganap ng mga mag-aaral” ay tanggapin at ipinapakita nito na “walang makabuluhang” epekto sa pagitan nila.

Ibig sabihin, hindi naging epektibo ang pagtuturo ng karunungan bayan gamit ang polyeto upang maging mas malawak ang kaalaman nila sa nasabing paksa. Lubos na nahirapan ang mga mag-aaral sa pag-aanalisa at pagsusuri sa bawat karunungan bayan. Maging ang mga halimbawa ay mas dapat paramihin nang sa gayon ay magkaroon ng makabuluhang epekto sa pagitan nila.

Planong Gawaing Iminumungkahi batay sa Resulta ng Pagsusuri

Ang pag-aaral na ito ay nagpapakita ng Planong Gawaing Iminumungkahi batay sa Resulta ng Pagsusuri.

Mababatid sa talahanayan ang mga titulo ng aktibidad, layunin ng aktibidad at mga inaasahang resulta, mga taong kasangkot, aktibidad at panahon ng pagsasagawa.

Batay sa talahanayan sa itaas, mababatid ang planong gawaing iminumungkahi batay sa resulta ng pagsusuri. Sa panahon ng

pagsagawa nito ito ay umiikot sa buong Panuruang Taon 2024-2025 . May apat aktibidad ang gustong mangyari ng mananaliksik ang una ay ang pagkakaroon ng Filipino Camp 2025, susundan ng isang palihan o seminar, magkakaroon din ng SLAC session at Kolaborasyon.

Sa “Talas-Salitaan sa Kamping 2025” na kung saan ay mahahasa ang pag-iisip ng mga mag-aaral sa iba’t ibang salita. Ang mg sumusunod ang magiging gawain na kung saan sa buwan ng Agosto ay ipinagdiriwang ang Buwan ng Wika, kaugnay dito ay magkakaroon ng tagisan ang mga mag-aaral patungkol sa paghahasa ng kanilang bokabularyo. Ang mga mag-aaral ay bubuo ng mga salita gamit ang mga magnetic letters o cut-out letters at ito ay tatawaging “TALAS-SALITAAN”. Magbibigay ng hanay ng mga letra at pahulaan sa mga bata kung anong mga salita ang maaring mabuo nila. Gamit ang nabuong salita ay bubuo ang naman ang mga mag-aaral ng pangungusap. Gamit naman ang flashcards na ipakikita ng guro, ang mga mag-aaral ay paulit-ulit na babasahin ang mga salita. Tutukuyin ng mga mag-aaral ang kahulugan ng ipinabasang salita.

Makikita sa talahanayan 13 ang planong gawaing Iminumungkahi batay sa Resulta ng Pagsusuri.



Talahanayan 13

Planong Gawaing Iminumungkahi batay sa Resulta ng Pagsusuri

TITULO NG AKTIBIDAD	LAYUNIN AT INAASAHANG RESULTA	MGA TAONG KASANGKOT	AKTIBIDAD	PANAHON NG PAGSASAGAWA
“ TALAS-SALITAAN SA KAMPING 2025”	<p>Magkaroon ng mga pagsasanay sa pag-unawa ng mga bagong salita</p> <p>Mahasa ang pag-iisip ng mga mag-aaral sa iba’t ibang salita.</p>	Guro at Mag-aaral	<p>“FILIPINO CAMP 2025”</p> <ol style="list-style-type: none"> 1.Sa buwan ng Agosto ay ipinagdiriwang ang Buwan ng Wika, kaugnay dito ay magkakaroon ng tagisan ang mga mag-aaral patungkol sa paghahasa ng kanilang bokabularyo. 2. Ang mga mag-aaral ay bubuo ng mga salita gamit ang mga magnetic letters o cut-out letters at ito ay tatawaging "TALAS-SALITAAN”. 2.Magbibigay ng hanay ng mga letra at pahulaan sa mga bata kung anong mga salita ang maaring mabuo nila. 3.Gamit ang nabuong salita ay bubuo ang naman ang mga mag-aaral ng pangungusap. 4.Gamit naman ang flashcards na ipakikita ng guro, ang mga mag-aaral ay paulit-ulit na babasahin ang mga salita. 5.Tutukuyin ng mga mag-aaral ang kahulugan ng ipinabasang salita. 	Agosto 2025
“ SEMINAR TAYO!”	<p>Mapalawak ang kaalaman ng mga mag-aaral sa kahalagahan ng pagbasa.</p> <p>Mahasa ang makro kasanayang pagbasa.</p>	Mga guro at Mag-aaral	<p>“PALIHAN O SEMINAR”</p> <ol style="list-style-type: none"> 1.Sa palihan na ito, ang lahat ng mag-aaral ay imbitado. 2.Maghahanda ng programa ang guro, at mag-iimbita ng mahusay na tagapagsalita. 3.Magkakaroon ng mga palaro na siyang lalahukan ng mga mag-aaral ipababatid ang kahalagahan ng pagbasa na mahahasa ang kanilang kasanayan dito. 	Setyembre 2025
“ Komprehensyon”	<p>Mapabuti ang kasanayan sa pag-unawa.</p> <p>Mapaunlad ang komprehensyon ng mga mag-aaral.</p>	Guro at Mag-aaral	<p>“SLAC SESSION”</p> <ol style="list-style-type: none"> 1.Ang lahat ng guro ay iimbitahan, tutukuyin ng mga guro ang mga mag-aaral na nahihirapang unawain ang isang babasahin. 2. Tatalakayin ng guro ang mga sumusunod sa kanilang mga mag-aaral: <ol style="list-style-type: none"> a.Ang bawat isang mag-aaral ay maghahanda ng isang maikling kwento. b.Magkakaroon ng kolaborasyon ang mga mag-aaral sa kapwa nila mag-aaral pipili sila ng isang kapareha. c.Kapag mayroon na silang kapareha, kukuwentuhan niya ito at tatanungin ukol sa kanyang kinuwento. d.Magkakaroon ng pagpupuntos sa bawat tamang kasagutan na ibibigay ng kanyang kapwa mag-aaral. 	Oktubre 2025



<p>“Araw-araw Basa”</p>	<p>Mapaunlad ang makrong kasanayang pagbasa . Mahasa at mapaunlad ang kakayang bumasa ng mag-aaral.</p>	<p>Guro, Mag-aaral at Kamag-aaral</p>	<p>“KOLABORASYON”</p> <ol style="list-style-type: none"> 1.Ihahanda ang mga babasahin. 2.Magtutulongan ang mga mag-aaral na marunong at di marunong bumasa. 3. Ang mga bihasa na sa pagbasa ay tutulongan ang kanyang kapareha. 4. Pababsahin araw araw sa loob ng 15 hanggang 20 minuto paglatapos ng klase. 5. Susuriin ng guro ang pag-unlad ng mag-aaral tuwing Biyernes ang huling araw sa isang linggo. 	<p>Hulyo 2024-Abril 2025</p>
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Sa titulong “Seminar Tayo!” na mapalawak ang kaalaman ng mga mag-aaral sa kahalagahan ng pagbasa at mahasa ang makro kasanayang pagbasa.Ito ay gaganapin sa buwan ng Setyembre 2025. Sa palihan na ito, ang lahat ng mag-aaral ay imbitado. Maghahanda ng programa ang guro, at mag-iimbita ng mahusay na tagapagsalita. Magkakaroon ng mga palaro na siyang lalahukan ng mga mag-aaral ipababatid ang kahalagahan ng pagbasa na mahahasa ang kanilang kasanayan dito.

Sa titulo namang “Komprehensyon” Mapabuti ang kasanayan sa pag-unawa at mapaunlad ang komprehensyon ng mga mag-aaral. Magkakaroon ng SLAC ang lahat ng guro ay iimbitahan, tutukuyin ng mga guro ang mga mag-aaral na nahihirapang unawain ang isang babasahin. Tatalakayin ng guro ang mga sumusunod sa kanilang mga mag-aaral: a. Ang bawat isang mag-aaral ay maghahanda ng isang maikling kwento; b.Magkakaroon ng kolaborasyon ang mga mag-aaral sa kapwa nila mag-aaral pipili sila ng isang kapareha; c.Kapag mayroon na silang kapareha, kukuwentuhan niya ito at tatanungin ukol sa kanyang kinuwento.

Isa pang titulo ng aktibidad na “Araw-araw basa”, na naglalayong mahasa at mapaunlad ang kakayang bumasa ng mag-aaral. Gaganapin ito sa loob ng buong taon na kung saan ay ihahanda ang mga babasahin. Magtutulongan ang mga mag-aaral na marunong at di marunong bumasa. Ang mga bihasa na sa pagbasa ay tutulongan ang kanyang kapareha.

Sa mga planong gawain ng mananaliksik ang makrong kasanayang pagbasa ng mga mag-aaral ay mahahasa at mapaunlad.

4. KONKLUSYON AT REKOMENDASYON

Sa pamamagitan ng mga inilahad na kinalabasan, nabuo ang mga sumusunod na konklusyon:

Ang haypotesis na “Walang Makabuluhang Epekto ang PONAYAN bilang Interbensyon sa Kasanayan sa Gawaing Pagbasa sa Pagganap ng mga Mag-aaral” ay tanggap base sa resulta ng bawat suliraning inilahad.

Sa haypotesis naman na “Walang Makabuluhang Epekto ang Pagpapalawak ng Kaalaman sa Karunungan Bayan sa pagganap ng mga mag-aaral” ay tanggap at ipinapakita nito na “walang makabuluhang” epekto sa pagitan nila.

Ibig sabihin lamang nito na hindi naging mabisa ang polyetong ginawa ng mananaliksik, may kahalintulad na silang nabasa nito o kaya naman ay may angkin na silang kaalaman pagdating sa mga karunungan bayan. Bukod dito, ang paggamit ng iba't

ibang antas ng mga tagatugon ay hindi naging epektibo sa susunod ay tukuying mabuti kung sino ang kinakailangang maging tagatugon sa pananaliksik. Maari ding kinulang pagpapaliwanag ng mga konsepto, na siyang nagpapalakas pa sa kanilang kaalaman at pag-unawa sa paksa.

Matapos ang pag-aaral at pagsusuri ng mga natuklasan, iminumungkahi ng mananaliksik ang sumusunod:

1. Batay sa resulta ng pananaliksik na ito, ang mga guro ay payabungin at ayusin ang nabuong polyeto. Dagdagan pa ang mga halimbawa ng mga karunungan bayan maaring bigyan ng karagdagang pagsusuri at rebisyon.
2. Hinihikayat ng mananaliksik ang mga mag-aaral na bigyang interes ang pagbabasa. Humanap ng mga interbensyonal na kagamitang pagbasa upang matugunan ang suliranin, maging ang mga mag-aaral ay huwag makalimot at maging gabay ang mga karunungan bayan tungo sa kagandahang asal.
3. Para sa mga namumuno sa paaralan, nawa’y patuloy na suportahan ng paaralan ang mga guro na bumubuo ng isang kagamitang interbensyon upang maging maayos at umunlad pa ang mga materyal sa pagbasa. Dagdagan ang mga impormasyon nang maging epektibo ang materyal.

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KOMPIYA (KOMUNIKASYON AT ORTOGRAPIYA): KAGAMITANG PAMPAGKATUTO SA FILIPINO AT KAKAYAHAN SA PROSESO NG PAGSULAT SA PAGGANAP NG MGA MAG-AARAL

Nazereth Renz R. Villasorda

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pananaliksik na ito ay naglayon na makabuo ng kagamitang pampagkatuto sa Filipino at mapaunlad ang kakayahan sa proseso ng pagsulat sa pagganap ng mga mag-aaral sa ikalabing-isang baitang ng Dayap National Integrated High School. Nilayon nito na malaman ang antas ng kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto, gayundin ang pagganap sa proseso ng pagsulat at sa replektibong sanaysay. Inalam din ang makabuluhang epekto ng kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino at kakayahan sa proseso ng pagsulat. Bumuo ng interbensiyon upang mapaunlad ang kagamitang pampagkatuto na KOMPIYA.

Ginamit din sa pag-aaral na ito ang deskriptib na pamamaraan. Upang makalap ang datos, gumamit ang mananaliksik ng talatanungan at pagsulat ng replektibong sanaysay. Ang mga tagasagot ay kabuuang limang (5) pangkat na nagmula sa iba't ibang strand ng senior high school sa Dayap National Integrated High School na pinili sa pamamagitan ng purposive sampling.

Batay sa kinalabasan ng pag-aaral, ang antas ng pagtanggap ng mga tagasagot sa kawastuhan ng KOMPIYA batay sa layunin, nilalaman, pagsasanay, disenyo, teknikal na pormat, at kaangkupan ay nangangahulugang lubos na katanggap-tanggap. Masasabi rin na ang antas ng paggamit ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay at pagbigkas ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Lumabas naman na ang antas ng pagganap ng mag-aaral batay sa Pagsulat ng Replektibong Sanaysay ay may mapaglarawang katumbas na Pinakamahusay at may literal na paliwanag na Napakakasiya-siya. Ang naging resulta naman sa ikaapat na suliranin ay walang makabuluhang epekto ang kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa pagganap ng mga mag-aaral at ipinapakita nito na "walang makabuluhang" epekto sa pagitan nila. Ang huling resulta ay walang makabuluhang epekto ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat sa pagganap ng mga mag-aaral at ipinapakita nito na "walang makabuluhang" epekto sa pagitan nila. Nangangahulugan ito ng kawalang katiyakang ang kagamitan ay nakatulong upang mahubog ang kasanayan ng mga mag-aaral sa proseso ng pagsulat.

Sa pamamagitan ng mga inilalahad na kinalabasan, ang mga konklusyon sa haypotesis ay dapat tanggapin na walang epekto ang kagamitang pampagkatutong KOMPIYA sa pagganap ng mga mag-aaral.

Sa pangkalahatang rekomendasyon, iminumungkahi ng mananaliksik na gamitin ang kagamitang pampagkatuto na KOMPIYA sa ibang track ng SHS tulad ng mga TVL upang mahasa ang kanilang kasanayan sa ortograpiya at maging sa pagsulat.

SUSING SALITA: KOMPIYA; kagamitang pampagkatuto; proseso ng pagsulat

1. PANIMULA

Ang gramatika ay isang mahalagang aspeto ng anumang wika na naglalaman ng mga patakaran at prinsipyo na nagtatakda kung paano bumubuo at ginagamit ang mga salita, parirala, at pangungusap upang magpahayag ng kahulugan. Sa pamamagitan ng gramatika, nagkakaroon ng istruktura at kaayusan ang wika, na siyang nagiging batayan ng malinaw at epektibong komunikasyon. Sa pamamagitan ng pag-aaral at pagsunod sa mga tuntunin ng gramatika, nagiging mas malinaw at epektibo ang komunikasyon, at nagkakaroon ng matibay na batayan para sa patuloy na pag-unlad at pagpapayaman ng wika.

Ang ortograpiya ay pagbabaybay at pagbibigay ng simbolo sa paraang pasalita at pasulat. Ang mga wika ay may sariling pamamaraan ng pagsasama ng mga simbolo/ titik/ karakter sa mga makabuluhang tunog at ponema. Ang Komisyon sa Wikang Filipino (KWF) ay nagtatag ng isang sistema para sa pagsasanib ng mga mahahalagang katangian ng sariling wika sa isang maayos na ortograpiyang Filipino na magagamit sa lahat ng mga wika ng Pilipinas. Ang panuntunang ito ay nagmula sa kasalukuyang paggamit ng wikang pambansa at pinupunan ang

mga napagkasunduang tuntunin na nagreresulta mula sa iba't ibang pamamaraan ng paghingi ng gabay sa mga kontrobersyal na usaping ortograpiya (Buendia, 2019).

Sinabi ni Almario (2015) na ang ortograpiyang Filipino o palatitikan ay binubuo ng mga tuntunin. Sa mahabang panahon na lumipas, hindi na alintana ang mga naganap na pagbabago sa ortograpiya ng wikang pambansa mula sa pinagyamang alpabeto o Alpabetong Pilipino ng Pilipinas hanggang sa Ortograpiyang Pambansa ng 2013.

Lumabas naman sa pag-aaral ni Ibay (2021) na "Kakayahan ng mga Guro sa Filipino: Susi sa Pagpapayaman ng Kaalaman sa Gramatika ng mga Mag-aaral," na pangunahing tungkulin ng mga guro sa pagtuturo ng wika ay ang balarila. Ang kaalaman ng mga mag-aaral ay maaaring may kinalaman sa kakayahan ng mga guro.

Patuloy na isinagawa ang BE-LRP (DO no.18 s. 2020) na patungkol sa iba't ibang paraan o polisiya sa pagbibigay ng edukasyon sa mga mag-aaral. Maraming estudyante ang nahirapan sa pagsulat, pagbasa at pag-unawa sa binabasa, kung



kaya't ipinagpatuloy ang programa ng Departamento ng Edukasyon na Learning Recovery and Continuity Plan (LRCP)

Matapos ang pandemya at unti-unting bumalik ang mga estudyante sa paaralan at napansin ang naging hirap ng mga mag-aaral. Ang mga mag-aaral ng SHS sa Dayap National Integrated High School sa pamamagitan ng mga pre-test na ibinigay, ay nakitaan ng hirap sa mga proseso ng pagbasa, at pag-unawa sa binasa.

Ito ang nagbigay-daan sa mananaliksik upang bigyang-pansin ang aspektong ito sa mga mag-aaral ng Dayap National Integrated High School-Senior High School upang makabuo ng kagamitang pampagkatuto na makatutulong na mapaunlad ang kakayahan nila sa pasasalita at pagsulat. Ang pinagbatayang asignatura ay Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino (KPWKP) ng kagamitang pampagkatuto na workbook.

1.1 Paglalahad ng Suliranin

Ang mga katanungan ang sasagutin sa pananaliksik na ito:

1. Ano ang antas ng kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino batay sa;

1. 1. layunin;
1. 2. nilalaman;
1. 3. pagsasanay;
1. 4. disenyo;
1. 5 teknikal na pormat; at
1. 6 kaangkupan?

2. Ano ang antas ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat batay sa;

- 2.1. Pagbabaybay; at
- 2.2. Pagbigkas?

3. Ano ang antas ng pagganap ng mag-aaral batay sa Pagsulat ng Replektibong Sanaysay?

4. May makabuluhang epekto ba ang kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa antas ng pagganap ng mga mag-aaral?

5. May makabuluhang epekto ba ang KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat sa antas ng pagganap ng mga mag-aaral?

6. Anong programa ang maaaring mabuo upang paunlarin ang kagamitang pampagkatuto na KOMPIYA?

2. METODOLOHIYA NG PANANALIKSIK

Gumamit ng deskriptibong disenyo ang pananaliksik na ito. Ayon kay Baraceros (2019), ang deskriptibong disenyo ay ginagamit upang mangalap ng impormasyon ukol sa mga salik na kaugnay ng paksa ng pananaliksik. Sa pamamagitan ng mga nakalap na impormasyon at ebidensiyang ito, napatitibay ang konklusyon sa hinuha.

Gumamit din ang mananaliksik ng kwantitatibong pagdulog upang tukuyin ng lebel ng pagkatuto at pagganap ng mga estudyante sa ikalabing-isang baitang, gayundin sa pagtukoy ng pagtanggap sa materyal na KOMPIYA batay sa batayan, layunin at nilalaman at ang Pagsasanay batay sa katangian, disenyo, teknikal na porma at kaangkupan. Ginamit ang tseklist upang malaman at makuha ang datos na kailangan ng mananaliksik. Ginamit ang mga nabanggit na paraan upang mabigyang-interpretasyon ang mga angkop na datos sa pamamagitan ng talahanayan.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay naglalahad ng presentasyon, analisis, interpretasyon o pagpapakahulugan ng mga datos na nakalap ng mananaliksik. Ang mga ito ay iginawa ng talahanayan para sa mabilis na pagkakaunawa ng pananaliksik. Ang sumusunod na nakatalahanayang presentasyon at pagtalakay ay maglalapat ng ibayong karakterisasyon sa KOMPIYA (Komunikasyon at Ortograpiya) bilang kagamitang pampagkatuto at sa kasanayan ng mga mag-aaral sa proseso ng pagsulat. Matatagpuan din sa kabanatang ito ang interbensiyon na ginawa ng mananaliksik.

Ang mga datos na nakalahad sa kabanatang ito ay batay sa pagkakasunod-sunod ng pagblalahad ng suliranin. Ipapakita rin ang mga istatistikal na pamamaraan sa mga talahanayan na sumagot sa pananaliksik na KOMPIYA kagamitang pampagkatuto sa Filipino at kakayahan sa proseso ng pagsulat sa pagganap ng mga mag-aaral.

Antas ng Kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino

Sa pananaliksik na ito, sinuri ang nilalaman ng kagamitang KOMPIYA (Komunikasyon at Ortograpiya), at kung paanong makatutulong ang mga bahagi nito sa proseso ng pagsulat. Patungkol ito sa ortograpiya o pagbabaybay ng mga salita, pasulat o pasalita na pamamaraan man.

Upang malaman ang antas ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino, gumamit ang mananaliksik ng tseklist. Binigyang interpretasyon ang mga datos na galing sa respondante gamit ang Weighted Mean, Standard Deviation, at Literal na Paliwanag o Puna.

Napakahalaga ng kagamitang pampagkatuto tulad ng *workbook* dahil ito ang nagdudulot ng pagsasanay sa mga makrong kasanayan. Isa sa mabisang paraan ang *printed* na kagamitan sa pampagkatuto dahil may ilan pa ring estudyante ang walang kakayanan or paraan na makagamit ng teknolohiya.

Sa ibaba ay makikita ang antas ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat batay sa Layunin.



Talahanayan 1

Antas ng kawastuhan ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino batay sa Layunin

Mga Pahayag	Mean	SD	Puna
<i>Malinaw na nakalahad ayon sa porma ng SMART.</i>	4.72	0.48	Lubos na sumasang-ayon
<i>Pinauunlad nito ang kasanayan sa komunikasyon ng mga mag-aaral bilang isa sa mga esensyal na kasanayang nararapat mapag-yaman sa mga mag-aaral.</i>	4.81	0.45	Lubos na sumasang-ayon
<i>Angkop ang mga layunin sa kakayahan, interes at abilidad ng mga mag-aaral.</i>	4.59	0.58	Lubos na sumasang-ayon
<i>Nakaangkla sa Basic Education – Learning Recovery Plan (BE-LRP) ng paaralan.</i>	4.57	0.57	Lubos na sumasang-ayon
<i>Kapaki-pakinabang sa pangmatagalang ikauunlad ng kalidad ng edukasyon ang mga itinakdang layunin.</i>	4.67	0.54	Lubos na sumasang-ayon

Overall Mean: 4.67

Standard Deviation: 0.34

Literal na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “Pinauunlad nito ang kasanayan sa komunikasyon ng mga mag-aaral bilang isa sa mga esensyal na kasanayang nararapat mapag-yaman sa mga mag-aaral” na nakakuha ng (M=4.81, SD=0.45) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa layunin.

Ang ikalawang pahayag na may mataas na iskor ay “Malinaw na nakalahad ayon sa porma ng SMART” na nakakuha ng (M=4.72, SD=0.48) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa layunin.

Ang ikatlong pahayag na “Kapaki-pakinabang sa pangmatagalang ikauunlad ng kalidad ng edukasyon ang mga itinakdang layunin” ay nakakuha ng (M=4.67, SD=0.54) na may deskripsiyon na lbhang mataas at pun ana lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa layunin.

Ang ikaapat na pahayag naman na “Angkop ang mga layunin sa kakayahan, interes, at abilidad ng mga mag-aaral” ay nakakuha ng (M=4.59, SD=0.59). Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa layunin.

Ang pahayag na may pinakamababang iskor ay ang “Nakaangkla sa Basic Education – Learning Recovery Plan (BE-LRP) ng paaralan” na nakakuha ng ng (M=4.57, SD=0.57). Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa layunin.

Ang kabuoang resulta ng pananaliksik ay may (WM=4.67, SD=0.34) ay nagpapakita na ang antas ng paggamit ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino ayon sa layunin ay may literal na paliwanag na lubhang mataas. Nangangauhulugang may lubos na katanggap-tanggap itong layunin na siyang naging mapa ng binuong kagamitan.

Laman ng talahanayan 2 ang Antas ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) nilang kagamitang pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat batay sa Nilalaman.

Talahanayan 2

Antas ng Kawastuhan ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino batay sa Nilalaman

Mga Pahayag	Mean	SD	Puna
<i>Wasto ang pagkakaayos ng mga gawain sa KOMPIYA upang makagabay sa pag-unawa ng nasaklaw na aralin.</i>	4.70	0.50	Lubos na sumasang-ayon
<i>Kongkreto at organisado ang nilalaman ng KOMPIYA.</i>	4.67	0.51	Lubos na sumasang-ayon
<i>Nakatutulong ang nilalaman ng KOMPIYA sa mabilis na pagkatuto ng mga mag-aaral.</i>	4.63	0.55	Lubos na sumasang-ayon
<i>Malinaw at maayos ang pagkakalahat ng nilalaman ng KOMPIYA.</i>	4.61	0.59	Lubos na sumasang-ayon
<i>Nakabatay ang nilalaman ng KOMPIYA sa kurikulum.</i>	4.43	0.65	Lubos na sumasang-ayon



Overall Mean: 4.61

Standard Deviation: 0.36

Literat na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “Wasto ang pagkakaayos ng mga gawain sa KOMPIYA upang makagabay sa pag-unawa ng nasaklaw na aralin” ay nagkamit ng (M=4.70, SD=0.50) na may deskripsiyon na lubhang mataas at puna na lubos sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa nilalaman.

Ang ikalawang pahayag na may mataas na iskor ay “Ang kongkreto at organisado ang nilalaman ng KOMPIYA” ay nagkamit ng (M=4.67, SD=0.51) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa nilalaman.

Ang ikatlong pahayag naman na “nakatutulong ang nilalaman ng KOMPIYA sa mabilis na pagkatuto ng mga mag-aaral” ay nagkamit ng (M=4.63, SD=0.55) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa nilalaman.

Ang ikaapat na pahayag na “Malinaw at maayos ang pagkakalahat ng nilalaman ng KOMPIYA” ay nagkamit ng (M=4.61, SD=0.59) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa nilalaman.

Ang ikaalimang pahayag na may pinakamababang marka naman ay “Nakabatay ang nilalaman ng KOMPIYA sa

kurikulum” ay nagkamit ng (M=4.43, SD=0.65). na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa nilalaman.

Ang kabuoan resulta ng pananaliksik ay may (WM=4.61, SD=0.36) ay malinaw na nagpapakita na ang antas ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino ayon sa nilalaman ay may literal na paliwanag na lubhang mataas. Ito ay nagpapahiwatig na ang nilalaman ng KOMPIYA ay lubos na akma sa mga pangangailangan ng asignatura at ng mga estudyante upang mapalawak ang kanilang abilidad sa pagsulat.

Ang nilalaman sa kagamitang pampagkatuto ay mahalaga dahil ito ang naglalaman ng impormasyon at kaalaman na kailangan ng mga mag-aaral upang matuto at umunlad. Ito ang nagbibigay ng kaugnayang kontekstwal at nagtutulak sa mga mag-aaral na mag-isip nang malalim at magkaroon g malawak na pang-unawa sa mga konsepto at kasanayan.

Ang nilalaman sa kagamitang pampagkatuto ay mahalaga dahil ito ang naglalaman ng impormasyon at kaalaman na kailangan ng mga mag-aaral upang matuto at umunlad. Ito ang nagbibigay ng kaugnayang kontekstwal at nagtutulak sa mga mag-aaral na mag-isip nang malalim at magkaroon g malawak na pang-unawa sa mga konsepto at kasanayan.

Ang talahanayan 3 ay naglalaman ng Antas ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat ukol sa Pagsasanay.

Talahanayan 3

Antas ng Kawastuhan ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino batay sa Pagsasanay

Mga Pahayag	Mean	SD	Puna
Malinaw ang pagkakalahad ng rubrik upang mataya nang maayos ang mga tugon sa pagsasanay.	4.53	0.61	Lubos na sumasang-ayon
May sapat na bigat ang mga puntos na nakalaan sa bawat pagsasanay bilang pagtataya sa natamong pagkatuto.	4.37	0.58	Lubos na sumasang-ayon
Malinaw na naipaliwanag sa mga mag-aaral ang mga pamantayan upang magabayan sa pagsasanay.	4.66	0.59	Lubos na sumasang-ayon
May iba't ibang uri ng pagsasanay na ginagamit upang matiyak na ang bawat kahinaan ay natututukan at patuloy na mapaghusay.	4.54	0.66	Lubos na sumasang-ayon
Nahahasa ang kaalaman ng mga mag-aaral sa pagsagot ng mga pagsasanay.	4.71	0.48	Lubos na sumasang-ayon

Overall Mean: 4.56

Standard Deviation: 0.37

Literat na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “nahahasa ang kaalaman ng mga estudyante sa pagsagot ng

mga pagsasanay” ay nagkamit ng (M=4.71, SD=0.48) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-



ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa pagsasanay.

Ang ikalawang pahayag na may mataas na iskor ay *“Malinaw na naipaliwanag sa mga estudyante ang mga pamantayan upang magabayan sa pagsasanay”* ay nagkamit ng (M=4.66, SD=0.59) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa pagsasanay.

Ang ikatlong pahayag naman na *“May iba’t ibang uri ng pagsasanay na ginamit upang matiyak na ang bawat kahinaan ay natutukan at patuloy na mapaghusay”* ay nagkamit ng (M=4.54,SD=0.66) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa pagsasanay.

Ang ikaapat na pahayag na *“Malinaw ang pagkakalahad ng rubrik upang mataya nang maayos ang mga tugon sa pagsasanay”* ay nagkamit ng (M = 4.53, SD = 0.61) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa pagsasanay.

Ang ikalimang pahayag ay na *“May sapat na bigat ang mga puntos na nakalaan sa bawat pagsasanay bilang pagtatay sa natamong pagkatuto”* ay nagkamit ng (M = 4.37, SD = 0.57) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa pagsasanay.

Ang kabuoang resulta ng pananaliksik ay may (WM=4.56, SD 0.37) ay nagpapahiwatigantas ng paggamit ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino ayon sa pagsasanay ay may literal na paliwanag na lubhang mataas. Nangangahulugang may lubos na katanggap-tanggap itong mga gawain na nakaayon sa pangangailangan ng asignatura at mga estudyante sa pagpapaunlad ng kakayahan sa pagsulat.

Kinakitaan ng mataas na resulta ang talahanayan ng pagsasanay kung kaya’t hindi maikakaila ang pag-aaral ni Florentino na ito ay tumutulong sa mga indibidwal na matutunan ang mga bagong impormasyon at kasanayan na kinakailangan sa kanilang mga gawain.

Ang talahanayan 4 ay nagpapakita ng Antas ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang kagamitang pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat ukol sa Disensyo.

Talahanayan 4

Antas ng Kwastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino batay sa Disensyo

Mga Pahayag	Mean	SD	Puna
<i>Tugma ang laki ng espasyo upang matugunan ang mga pagsasanay.</i>	4.42	0.61	Lubos na sumasang-ayon
<i>Malikhain ang presentasyon ng mga panuto, gawain at aralin.</i>	4.63	0.53	Lubos na sumasang-ayon
<i>Angkop ang font style, font type at font size para sa nilalaman, pagsasanay at antas ng mga target na gagamit.</i>	4.42	0.63	Lubos na sumasang-ayon
<i>Malaya sa anumang kiling pangkasarian ang mga grapiko at gawain.</i>	4.63	0.54	Lubos na sumasang-ayon
<i>Sapat ang sukat ng mga pantulong na ilustrasyon at grapiko ayon sa antas ng mga target na gawain.</i>	4.49	0.61	Lubos na sumasang-ayon

Overall Mean: 4.52

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Ang dalawang pahayag na may pinakamataas na iskor ay *“Malikhain ang presentasyon ng mga panuto, gawain at aralin at malaya sa anumang kiling pangkasarian ang mga grapiko at gawain”* ay nagkamit ng (M=4.63, SD=0.54 at 0.53) na may parehong deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa disensyo.

Ang susunod na mga pahayag na *“Ang sapat ang sukat ng mga pantulong na ilustrasyon at grapiko ayon sa lebel ng mga target na gawain”* (M=4.49, SD=0.61) na may deskripsiyon na lubhang

mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa disensyo.

Ang dalawang huling pahayag na may pinakamababang iskor na *“tugma ang laki ng espasyo upang matugunan ang mga pagsasanay at ang angkop ang font style, font type at font size para sa nilalaman, pagsasanay at lebel ng mga target na gagamit”* na may mean na (4.42) at standard deviation na (0.61 at 0.63) na may parehong deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang



kagamitang pampagkatuto batay sa disenyo

Ang kabuoang resulta ng pananaliksik na may (WM=4.52, SD=0.35) ay nagpapahiwatig na ang antas ng paggamit ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino batay sa disenyo ay may literal na paliwanag na lubhang mataas. Nangangahulugang may ganap na katanggap-tanggap itong disenyo upang maging kawili-wili sa mga estudyante na gumamit nito. Malinaw na kaakit-akit sa mga mag-aaral ang

maayos na disenyo sa isang kagamitang pampagkatuto hindi lamang ang mga mga kulay o itura nito maging kung paano ito iprenisenta sa mga gagamit na mag-aaral.

Ang talahanayan 5 naman ay ang Antas ng kawastuhan ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat ukol sa Teknikal na Pormat.

Talahanayan 5

Antas ng Kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino batay sa Teknikal na Pormat

Mga Pahayag	Mean	SD	Puna
Malaya ang materyal sa anumang kalisyaang tipograpikal.	4.39	0.59	Lubos na sumasang-ayon
Nakaayon ang mga terminong ginamit sa kapormalan ng materyal bilang pang-agapay sa edukasyon.	4.61	0.55	Lubos na sumasang-ayon
May kaayusan ang mga bantas at sapat ang espasyo ng mga aralin.	4.65	0.56	Lubos na sumasang-ayon
Malaya ang materyal sa anumang kalisyaang gramatikal.	4.56	0.56	Lubos na sumasang-ayon
Nagsisilbing modelo ng aralin ang taglay na teknikalidad ng materyal.	4.64	0.57	Lubos na sumasang-ayon

Overall Mean: 4.57

Standard Deviation: 0.39

Literal na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “May kaayusan ang mga bantas at sapat ang espasyo ng mga aralin” ay nagkamit ng (M=4.65, SD=0.56) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa teknikal na pormat.

lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa teknikal na pormat.

Ang ikalawang pahayag na “Ang nagsisilbing modelo ng aralin ang taglay na teknikalidad ng materyal” na nagkamit ng (M=4.64, SD=0.57) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa teknikal na pormat.

Ang pahayag na may pinakamababang iskor ay “Malaya ang materyal sa anumang kalisyaang tipograpikal” na nagkamit ng (M = 4.39, SD = 0.59) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa teknikal na pormat.

Ang ikatlong pahayag naman na “Nakaayon ang mga terminong ginamit sa kapormalan ng material bilang pang-agapay sa edukasyon” ay nagkamit ng (M=61, SD=0.55) na may deskripsiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa teknikal na pormat.

Ang kabuuang resulta ng pananaliksik na ito (WM=4.57; SD=0.39) ay nagpapahiwatig na lubhang mataas ang lebel ng paggamit ng KOMPIYA (Komunikasyon at Ortograpiya) bilang kagamitang pampagkatuto sa Filipino ukol sa teknikal na pormat. Nangangahulugang may lubos na katanggap-tanggap itong teknikal na pormat na nakatulong sa malinaw na daloy ng pagkatuto mula sa binuong kagamitan. Kung kaya’t malinaw na ang teknikal na pormat ay mahalaga sa pagbuo ng mga kagamitang pampagkatuto maging ito ay online o printed kinakailangang maayos ang pormat nito.

Ang ikatlong pahayag naman na “Malaya ang materyal sa anumang kalisyaang gramatikal” ay nagkamit ng (M=56, SD=0.56) na may deskripsiyon na lubhang mataas at puna na

Ang talahanayan 6 ay nagpapakita ng Antas ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat ukol sa Kaangkupan.



Talahanayan 6

Antas ng Kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino batay sa Kaangkupan

Mga Pahayag	Mean	SD	Puna
<i>Angkop ang mga pagsasanay sa inilahad sa aralin.</i>	4.80	0.42	Lubos na sumasang-ayon
<i>Bagay ang mga layunin sa hanay ng aralin at mga gawain.</i>	4.67	0.54	Lubos na sumasang-ayon
<i>Nakaangkla ang bigat ng mga gawain sa pagsasanay sa antas ng mga mag-aaral.</i>	4.33	0.63	Lubos na sumasang-ayon
<i>Nakaayon ang mga nilalaman at pagsasanay sa pangangailangan ng mga mag-aaral sa ika-21 siglo.</i>	4.53	0.59	Lubos na sumasang-ayon
<i>Tugma ang nilalaman, gawain at pagsasanay sa indibidwal na pagkakaiba-iba ng mga mag-aaral</i>	4.63	0.54	Lubos na sumasang-ayon

Overall Mean: 4.59

Standard Deviation: 0.34

Literal na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “*Angkop ang mga pagsasanay sa inilahad sa aralin*” ay nagkamit ng (M=4.80, SD=0.42) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa kangkupan.

Ang ikalawang pahayag na may mataas na iskor ay “*bagay ang mga layunin sa hanay ng aralin at mga gawain*” ay nagkamit ng (M=4.67, SD=0.54) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa kangkupan.

Ang ikatlong pahayag naman na “*Ang tugma ang nilalaman, gawain at pagsasanay sa indibidwal na pagkakaiba-iba ng mga mag-aaral*” ay nakakuha ng (M=4.63, SD=0.54) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa kangkupan.

Ang ikaapat na pahayag naman na “*Ang nakaayon ang mga nilalaman at pagsasanay sa pangangailangan ng mga mag-aaral sa ika-21 siglo*” ay nagkamit ng (M=4.53, SD=0.59) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa kangkupan.

Ang pahayag na may pinakamababang iskor “*paglalahad na nakaangkla ang bigat ng mga gawain sa pagsasanay sa lebel ng mga estudyante*” na nagkamit ng (M = 4.33, SD = 0.63) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-

ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa KOMPIYA bilang kagamitang pampagkatuto batay sa kangkupan. Kinakailangan na ang mga pagsasanay ay hindi lamang panay Lower order thinking skills kung hindi kailangan din ng higher order thinking skills.

Ang kabuoang resulta ng pananaliksik (WM=4.59, SD=0.34) ay ipinahihiwatig na ang antas ng paggamit ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino ayon sa kaangkupan ay may literal na palianag na lubhang mataas. Nangangahulugan may lubos na katanggap-tanggap itong kaangkupan sa interes o kawilihan, pangangailangan at lebel ng mga estudyante na gumamit. Nararapat na maging angkop ang mga materyal na kagamitan sa pangangailangan ng mga mag-aaral sa pagtamo ng mga kaalaman na.

Antas ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat

Upang malaman ang antas ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat batay sa Pagbabaybay, at Pagbigkas, ginamitan ng tseklis ang pananaliksik. Binigyang interpretasyon ang mga datos mula sa respondante gamit ang Weighted Mean, Standard Deviation, at Literal na Paliwanag. Ang proseso pagsulat ay isang uri ng makrong kasanayan na mahalaga sa isang indibidwal. Ito ay isang paraan ng pagpapahayag ng damdamin para sa ibang tao. Magiging malaki ang tulong nito sa paraan ng komunikasyon.

Ang talahanayan 7 ay nagpapakita ng Antas ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat batay sa Pagbabaybay.



Talahanayan 7

Antas ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat batay sa Pagbabaybay

Mga Pahayag	Mean	SD	Puna
May baryasyon ng mga gawain na susubok sa kasanayan sa pagbabaybay.	4.67	0.53	Lubos na sumasang-ayon
Humahamon at nakapagpapaunlad sa kritikal na pag-iisip ang gawain sa pagbabaybay.	4.64	0.55	Lubos na sumasang-ayon
Madaling ilapat sa pagsulat ang mga tuntunin sa pagbabaybay.	4.36	0.61	Lubos na sumasang-ayon
May sapat na pagtataya na susukat sa kasanayan sa pagbabaybay.	4.55	0.60	Lubos na sumasang-ayon
Nakatulong ang rubrik upang maging gabay sa wastong baybay sa pagbuo ng sulatin.	4.72	0.52	Lubos na sumasang-ayon

Overall Mean: 4.58

Standard Deviation: 0.38

Literal na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “Nakatulong ang rubrik upang maging gabay sa wastong baybay sa pagbuo ng sulatin” ay nagkamit ng (M=4.72, SD=0.52) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay.

Ang ikalawang pahayag na “Ang may baryasyon ng mga gawain na susubok sa kasanayan sa pagbabaybay” ay nagkamit ng (M=4.67, SD=0.53) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay.

Ang ikatlong pahayag naman na “Humahamon at nakapagpapaunlad sa kritikal na pag-iisip ang gawain sa pagbabaybay” at nakamit ng (M=4.64, SD=0.55) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay.

Ang ikaapat na pahayag naman na “May sapat na pagtataya na susukat sa kasanayan sa pagbabaybay” ay nagkamit ng (M=4.55, SD=0.60) na may deskrisiyon na lubhang mataas at

puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay.

Ang pahayag na may pinakamababang iskor ay “Paglalahad na madaling ilapat sa pagsulat ang mga tuntunin sa pagbabaybay” ay nagkamit ng (M = 4.36, SD = 0.61) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay.

Ang kabuoang resulta ng pananaliksik (WM=4.58, SD=0.38) ay nagpapahiwatig na ang antas ng paggamit ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino ayon sa pagbabaybay ay may literal na paliwanag na lubos na mataas. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbabaybay. Ipinapakita lang ng resulta na ang tamang pagbabaybay ay tumutulong sa pagpapanatili ng mga pamantayan sa wika. Ito ay nag-aambag sa isang unipormeng sistema ng pagsusulat na kinikilala at ginagamit ng lahat.

Ang talahanayan 8 ay naglalaman ng Antas ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat ukol sa Pagbigkas.

Talahanayan 8

Antas ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat batay sa Pagbigkas

Mga Pahayag	Mean	SD	Puna
Malinaw na naipaliwanag ang mga tuntunin sa pagbigkas ng salita.	4.76	0.47	Lubos na sumasang-ayon
Nakaayon ang mga tuntunin sa pagbigkas sa mapagkakatiwalaang sanggunian.	4.71	0.51	Lubos na sumasang-ayon
Madaling unawain ang mga ginamit na halimbawa sa pagbigkas ng salita.	4.60	0.6	Lubos na sumasang-ayon
Mabilis tandaan ang mga tuntunin sa pagbigkas dahil sa magaan na pagkalahad.	4.57	0.6	Lubos na sumasang-ayon
May sapat na pagsasanay upang mahasa ang kasanayan sa pagbigkas.	4.73	0.5	Lubos na sumasang-ayon



Overall Mean: 4.67

Standard Deviation: 0.37

Literal na paliwanag: Lubhang Mataas

Ang unang pahayag na may pinakamataas na iskor ay “*Malinaw na naipaliwanag ang mga tuntunin sa pagbigkas ng salita*” ay nagkamit ng (M=4.76, SD=0.47) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbigkas.

Ang ikalawang pahayag na may mataas na iskor ay “*Sapat na pagsasanay upang mahasa ang kasanayan sa pagbigkas*” ay nagkamit ng (M=4.73, SD=0.49) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbigkas.

Ang ikatlong pahayag naman na “*Nakaayon ang mga tuntunin sa pagbigkas sa mapagkakatiwalaang sanggunian*” ay nagkamit ng (M=4.71, SD=0.51) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbigkas.

Ang ikaapat na pahayag naman na “*Madaling unawain ang mga ginamit na halimbawa sa pagbigkas ng salita*” ay nagkamit ng (M= 4.60, SD = 0.6) na may deskrisiyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbigkas.

Ang pahayag na may pinakamababang marka ay “*paglalahad na mabilis tandaan ang mga tuntunin sa pagbigkas dahil sa magaan na pagkakalahad*” ay nagkamit ng (M= 4.57, SD = 0.62) na may deskrisiyon na lubhang mataas at puna na lubos

na sumasang-ayon. Nangangahulugan lamang na sumasang-ayon ang mga tagatugon sa kakayahan sa proseso ng pagsulat batay sa pagbigkas.

Ang kabuoang resulta ng pananaliksik (WM=4.68, SD=0.37) ay nagpapahiwatig na ang antas ng paggamit ng KOMPIYA (Komunikasyon at Ortograpiya) bilang kagamitang pampagkatuto sa Filipino ukol sa pagbigkas. Nangangahulugang may literal na pahayag na lubos na mataas itong kakayahang magturo ng pagbigkas na makakaagapay sa mga estudyante sa kasanayang sa epektibong komunikasyon. Pinapakita sa resulta ng pagbigkas na napakahalaga ng napakaraming pagsasanay.

Antas ng Pagganap ng mga Mag-aaral batay sa Pagsulat ng Replektibong Sanaysay

Nilalaman ng pananaliksik na ito ang Antas ng Pagganap ng mga Estudyante ukol sa Pagsulat ng Replektibong Sanaysay. Ito ay isang pamamaraan ng pagpapaksa at analisi ng mga personal na karanasan, opinyon, at damdamin. Isa sa hakbang na maaaring sundan sa pagsulat ng isang replektibong sanaysay ay ang pagsasaayos ng mga datos upang hindi malito ang taong magbabasa nito.

Upang malaman ang lebel ng pagganap ng mga estudyante ukol sa Pagsulat ng Replektibong Sanaysay ay nagpasagot ang mananaliksik ng isang gawain na sasagutin sa pamamagitan ng sanaysay at binigyan ito ng karampatang marka base sapamantayan na inilahad ng mananaliksik. Binigyang interpretasyon ang mga datos mula sa respondante gamit ang *Frequency, Weighted Mean, Standard Deviation*, at Literal na Paliwanag o Puna.

Ang talahanayan 9 ay naglalaman ng Antas ng Pagganap ng mag-aaral ukol sa Pagsulat ng Replektibong Sanaysay.

Talahanayan 9

Antas ng pagganap ng mag-aaral batay sa Pagsulat ng Replektibong Sanaysay

Raw Score	Kabuoan (f)	Bahagdan (%)	Mapaglarawang Katumbas
21-25	111	74%	Pinakamahusay
16-20	37	24.67%	Higit na Mahusay
11-15	2	1.33%	Mahusay
6-10	0	0.00%	Katamtamang Mahusay
1-5	0	0.00%	Hindi Mahusay
Total	150	100	
Weighted Mean		21.85	
Pinakamababang Marka		15	
Pinakamataas na marka		25	Napakakasiya-siya
Standard Deviation		2.01	

Ang talahanayan ay malinaw na nagpapakita ng lebel ng pagganap ng estudyante ukol sa Pagsulat ng Replektibong Sanaysay, sa kabuoang isangdaan at limampu na tagatugon. Ang raw score na “21 to 25” ay natamo ng nakakararaming

estudyante na isangdaan at labing-isa (111) o 74% ng kabuoang tumugon at may mapaglarawang katumbas na Pinakamahusay. Ang raw score na “16 to 20” ay mayroong namang bilang na tatlumpu at pito (37) o 24.67% ng kabuoang tumugon at may



mapaglarawang katumbas na Higit na Mahusay. Habang ang raw score na “11 to 15” ay nakakuha ng pinakamababang bilang na tatlo (3) o 1.33% ng kabuoang tumugon at may mapaglarawang katumbas na Mahusay.

May kabuoang resulta (WM=21.85, SD = 2.01) na may pinakamababang marka na 15 at pinakamataas na marka na 25 ay nagpapahiwatig na ang lebel ng pagganap ng estudyante ukol sa Pagsulat ng Replektibong Sanaysay ay napakakasiya-siya. Nangangahulugang ang KOMPIYA ay madaling nagamit ng mga respondante sa paglalapat ng repleksyon sa isang

sulatin.

Mangyaring tandaan na dapat magkaroon ka rin ng maayos na pagkakasunod-sunod ng mga ideya at magkaroon ng malinaw na panimula, gitna, at wakas. Ang paggamit ng mga konkreto at tiyakna halimbawa ay makatutulong sa pagpapakita ng iyong mga punto at magbibigay ng kalaliman sa iyong sanaysay.

Ang talahanayan 10 ay naglalaman ng Makabuluhang Epekto ng kawastuhan ng KOMPIYA (Komunikasyon at Ortograpiya) bilang Kagamitang Pampagkatuto sa Filipino sa pagganap ng mga estudyante.

Talahanayan 10

Makabuluhang Epekto ng Kawastuhan ng KOMPIYA Bilang Kagamitang Pampagkatuto sa Filipino sa Pagganap ng mga Mag-aaral

Pagganap	B	SE	β	t	P
Constant	25.478	2.714		9.387	0.000
Layunin		0.695	-0.667	-0.96	0.339
Nilalaman		0.728	-0.1	-0.138	0.891
Pagsasanay		0.755	-0.609	-0.806	0.421
Disenyo		0.637	0.51	0.8	0.425
Teknikal na Pormat		0.605	-0.223	-0.368	0.713
Kaangkupan		0.728	0.313	0.43	0.667
R-squared			0.031		
Adjusted R-squared			-0.01		
Standard Error of the Estimate		2.023			
F(6, 143)				0.754	.608

Upang malaman kung makabuluhan ba ang epekto ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa pagganap ng mga estudyante at gumamit ang mananaliksik ng *multiple regression* sa pagkuha ng mga datos sa pananaliksik na isinagawa.

F-test ng lahat ng modelo ay hindi makabuluhan (F (6, 143) = 0.754, p < 0.608), nagpapahiwatig na ang regression model ay hindi tugma sa mga datos. Ang standard error of the estimate ay 2.023, na sumasalamin sa average deviation sa pagitan ng sinusunod at hinulaan na pagganap ng mga estudyante.

Isinasaad ng Talahanayan ang resulta ng multiple regression analysis sa pagsusuri ng epekto sa pagitan ng kawastuhang ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa pagganap ng mga estudyante. Ang regression model ay nagpapaliwanag ng 3.1% ng variance sa pagganap ng mga estudyante (R-squared = 0.031). Ang Layunin ($\beta = -0.667$, p > 0.05), Nilalaman ($\beta = -0.1$, p > 0.05), Pagsasanay ($\beta = -0.609$, p > 0.05), Disenyo ($\beta = 0.51$, p > 0.05), Teknikal na Pormat ($\beta = -0.223$, p > 0.05) at Kaangkupan ($\beta = 0.313$, p > 0.05) ay walang positibong epekto sa pagganap ng mga estudyante. Ang

Ipinapahiwatig din nito na ang haypotesis na “Walang makabuluhang epekto ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa pagganap ng mga estudyante” ay tanggapin. Samakatuwid, walang epekto ang KOMPIYA sa pagkatuto ng mga estudyante.

Ang Talahanayan 11 ay nagpapakita ng Makabuluhang Epekto ng KOMPIYA bilang Kagamitang Pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat sa Pagganap ng mga estudyante.

Talahanayan 11

Makabuluhang Epekto ng KOMPIYA Bilang Kagamitang Pampagkatuto sa Filipino at Kakayahan sa Proseso ng Pagsulat sa Pagganap ng mga Mag-Aaral

Pagganap	B	SE	β	t	p
Constant	25.45	2.247		11.327	0.000
Pagbabaybay		0.601	-0.214	-0.356	0.722
Pagbigkas		0.622	-0.561	-0.901	0.369
R-squared			0.018		
Adjusted R-squared			0.004		
Standard Error of the Estimate		2.008			
F(2, 147)				1.311	0.273



Upang malaman kung makabuluhan ba ang epekto ng kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino at sa kakayahan sa proseso ng pagsulat sa pagganap ng mga estudyante, ginamitan ang pagsasaliksik na ito ng multiple regression.

Ipinapakita ng talahanayan ang resulta ng multiple regression analysis sa pagsusuri ng epekto sa pagitan ng kawasatuan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat sa pagganap ng mga estudyante. Ang regression model ay nagpapaliwanag ng 1.8% ng variance sa pagganap ng mga estudyante ($R\text{-squared} = 0.018$). Ang Pagbabaybay ($\beta = -0.214, p > 0.05$) at Pagbigkas ($\beta = -0.561, p > 0.05$) ay walang positibong epekto sa pagganap ng mga estudyante. Ang F-test ng lahat ng modelo ay hindi makabuluhan ($F(6, 143) = 1.311, p < 0.273$), nagpapahiwatig na ang regression model ay hindi tugma sa mga datos. Ang standard error of the estimate ay 2.008, na sumasalamin sa

average deviation sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Maliwanag na ipinapahiwatig nito na ang haypotesis na “Walang makabuluhang epekto ng kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat sa pagganap ng mga estudyante” ay tanggapin. Sa makatuwid, walang epekto ang KOMPIYA bilang kagamitang pampagkatuto sa Filipino. Nangangahulugan ito ng kawalang katiyakang ang kagamitan ay nakatulong upang mahubog ang kasanayan ng mga estudyante sa proseso ng pagsulat.

Programa upang mapaunlad ang Kagamitang Pampagtuturo na KOMPIYA (Komunikasyon at Ortograpiya)

Ang Talahanayan 12 ay nagpapakita ng nabuong Programa upang mapaunlad ang Kagamitang Pampagtuturo na KOMPIYA (Komunikasyon at Ortograpiya).

Talahanayan 12

Programa upang mapaunlad ang Kagamitang Pampagtuturo na KOMPIYA

Layunin	Istratehiya/ Aktibiti	Mga Kasangkot	Inaasahang Awtput
Matalakay ang mga tuntunin sa Ortograpiyang Filipino	Magbigyan ng seminar patungkol sa makabagong Ortograpiyang Filipino	Punongguro, MT, HT, at Mga Guro sa Filipino	Maging malinaw sa bawat isa ang bawat pagbabago sa Ortograpiyang Filipino
Malaman ang antas ng kaalaman ng mga mag-aaral sa ortograpiya	Magbigay ng paunang pagsusulit tungkol sa ortograpiya	Mga mag-aaral sa ika-11 baitang at mga guro sa Filipino	Mabigyang pansin ang mga mag-aaral na makakakuha ng mababang marka
Mapataas ang antas ng mga mag-aaral sa paggamit ng kagamitang pampagkatuto patungkol sa ortograpiya	Isama ang workbook na KOMPIYA sa mga gawaing ipagagawa sa mga mag-aaral ng TVL	Mga Guro sa Filipino at ika-11 mag-aaral sa SHS na nasa Track na TVL	Tumaas ang kaalaman ng mga mag-aaral sa Ortograpiya at mahasa sila sa pagbabaybay sa paraang pasalita at pasulat.

Ang programang interbensiyon ay isang gawain upang makatulong sa mga estudyante na mapayabong ang pagganap sa akademik. Ito ay pagbibigay ng mga aktibiti o gawain na nilalayong mapabuti ang kasanayan sa pag-aaral at pangkalahatang pag-unlad ng mga estudyante.

Sa pananaliksik na ito ay makikitang walang makabuluhang epekto ang paggamit ng KOMPIYA sa napiling respondante na mula sa ika-11 baitang ng track na HUMSS, ABM, at STEM. Kinakitaang sila ng kahusayan sa pagsagot sa mga nakahandang aktibiti sa *workbook* at sa pagsulat ng replektibong sanaysay sa kadahilanang nakapokus sa akademikong paksa o gawain ang mga ito.

Ang bawat simula ay kinakailangan ng mahusay na paghahanda. Ang seminar o palihan ay magandang paraan ng pagsisimula sa kahit na anong gawain. Maaaring magkaroon ng oportunidad ang mga indibidwal na magkaroon ng praktikal na

pagsasanay at pagpapaunlad ng kanilang kasanayan. Isa sa mga kailangang gawin interbensiyon sa pananaliksik na ito ay magkaroon ng seminar patungkol sa makabagong Ortograpiyang Filipino ang mga Punongguro, Head, Master, lalo na ang mga guro mismo sa Filipino. Higit na mainam na alam muna ng mga nabanggit ang paksa bago ibaba sa mga estudyante.

Bawat estudyante ay may kanya-kanyang kakayahan at kaalaman sa kanilang pinag-aaralan. Isa ang pagbibigay ng paunang pagsusulit sa pagtuklas ng lebel ng kaalaman ng mga estudyante bago magkaroon ng aktuwal na pagtuturo ng isang guro. Mas magiging mabilis sa isang guro ang pagbibigay ng mga kasanayan sa mga estudyante na naging mababa ang resulta. Maaaring masuri ang epekto ng ginawang interbensiyon gamit ang mga pagsasanay at pagkukumpara sa naunang marka ng mga estudyante.



Nilalayan din ng interbensiyon na ito na ipagamit ang kagamitang KOMPIYA sa mga estudyante mula sa ika-11 baitang Technical-Vocational-Livelihood (TVL) Track. Ang TVL track ay nakapokus sa kasanayang teknikal at bokasyonal halimbawa n anito ay ang Healthcare Services, ICT, Agri-Fishery Arts, Home Economics, Industrial Arts, at iba pa. Malaki ang magagawa ng workbook na ito upang tumaas pa ang kanilang kamalayan at kasanayan sa ortograpiya at sa mga pagbabago nito.

Sa pananaliksik nga nina Bacomo, Daculap, Ocampo, Paguia, Pentang & Bautista (2022), napatunayang hindi sapat payak na libro sa uri ng mga estudyante na mayroon sa ngayon, kung kaya, kinakailangan ang pagiging mapamaraan ng guro sa pagtukoy ng mga paraan kung paano matutulungan ang mga estudyante na lumago at magkamit ng higit pa bataysa kani-kanilang potensyal at isa sa mga kaparaanang ito ang pagpapagamit ng mga interbensiyong kagamitan.

Ang kagamitang pampagkatuto ay isang kapaki-pakinabang na materiyal na maaaring magamit ng mga estudyante sa mga panahon na hindi nakakapasok sa loob ng eskuwelahan upang hindi mahuli

4. KONKLUSYON AT REKOMENDASYON

Sa pamamagitan ng mga kinalabasan, ang mga konklusyon ay nabuo.

1. Ang haypotesis na nagpapahayag na Walang makabuluhang epekto ang kawastuhan ng KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa pagganap ng mga mag-aaral ay tinatanggap. Ngunit, maaari itong magdulot ng positibong epekto bilang kagamitang pampagkatuto sa layunin, nilalaman, disenyo, teknikal na pormat, at kaangkupan. Subalit, napakahalaga pa rin ng aktibong paglahok sa klase at pakikinig sa guro.
2. Ang haypotesis na nagpapahayag na Walang makabuluhang epekto ang KOMPIYA bilang kagamitang pampagkatuto sa Filipino sa Kakayahan sa Proseso ng Pagsulat sa pagganap ng mga mag-aaral ay tinatanggap. Maaari din itong magdulot ng positibong epekto bilang kagamitang pampagkatuto sa proseso ng pagbabaybay at pagbigkas. Gayunpaman, hindi pa rin dapat ito maging kapalit ng iba't ibang paraan ng pagsulat at maging kapalit ng pagsasanay. Mahalaga parin ang gabay ng guro upang magtamo ng kaalaman at kakayahan sa pagsulat.

Batay sa pagsusuri ng resulta at konklusyon, ang mga sumusunod ang rekomendasyon ng pag-aaral:

1. Sa mga guro iminumungkahi ang paggamit ng iba't iba pang anyo ng kagamitan bilang tugon sa pangangailangang mapaunlad ang kasanayan sa pagsulat ng mga mag-aaral. Gamitin ang KOMPIYA upang ito'y makaagapay sa pagpapaunlad sa kasanayan ng mga mag-aaral sa pagsulat ng iba pang anyo ng sulatin.
2. Sa mga mag-aaral gamitin ang kagamitang pampagtuturo na KOMPIYA sa ibang track ng SHS tulad ng mga TVL upang mahasa ang kanilang kasanayan sa ortograpiya at maging sa pagsulat.

3. Sa susunod pang mananaliksik, hinihikayat na mapalawig pa nila ang pag-aaral na ginawa at gawing batayan ang mga datos na nabuo mula rito.

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PAGGAMIT NG B-KARD SA KAWILIHAN SA PAGKATUTO, PAG-UNAWA SA BAYBAYIN AT PAGBABAYBAY AT PAGSASALINNG MGA MAG-AARAL

Marimar Musni Zaide

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pag-aaral na ito ay may titulong B-kard: Interaktibong Laro sa Kawilihan sa Pagkatuto Pag-unawa sa Baybayin sa Pagganap ng mga Mag-aaral. Nilalayon ng pag-aaral na ito na sagutin ang sumusunod na mga suliranin. Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Kagamitan sa paglalaro; Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Mekaniks; Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pag-uugali sa pagkatuto; Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pamamahala sa pagkatuto; Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pakikilahok; Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagbuo ng Salita; Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagsulat ng baybayin; Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagbasa. May makabuluhang epekto ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral at May makabuluhang epekto ng Pag-unawa sa Baybayin sa pagganap ng mga mag-aaral.

Ang deskriptibong pag-aaral na ito ay gumamit ng isandaan at limampu (150) na mag-aaral mula sa ika-2 ng kolehiyo ng pang-edukasyon ng Laguna University. Purposive Sampling ang ginamit sa pag-aaral na ito upang makuha ang sapat na sampol ng populasyon.

Lumabas sa pag-aaral ang antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa kagamitan sa paglalaro lumabas na nakakatulong at literal na paliwanag na lubhang mataas. Sa resulta ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa mekaniks lumabas na lubos na nakatutulong at literal na paliwanag na lubhang mataas. Gayundin sa resulta ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pag-uugali sa pagkatuto ay lumabas na lubos na nakatutulong at literal na paliwanag na lubhang mataas. Lumabas naman sa resulta ang pangkalahatang pagtatasa sa pagkatuto ng B-kard sa Kawilihan sa mga mag-aaral batay sa pagbasa at pagsulat ay may mapaglarawang katumbas na Mahusay at may literal na paliwanag na Napakakasiya-siya. Nagpapakita lamang ito na mataas ang nakuhang marka ng mga mag-aaral nang ginamit ang b-kard at ang huli batay sa datos na nakalap. May makabuluhang epekto ang b-kard bilang kagamitan sa pagpapaulad at pagkatuto ng Filipino sa pagganap ng mga mag-aaral lumabas na may makabuluhang epekto sa pagitan nila.

Batay sa kinalabasan ng pag-aaral na ang kongklusyon na ito ay nabuo; Ang haypotesis na ang kabanata 1 na "Walang makabuluhang epekto ang Interaktibong Laro sa Kawilihan bilang sa Pagkatuto at Pag-unawa sa Baybayin sa Pagganap ng mga mag-aaral." Ay huwag tanggapin, ipinapakita nito na may "makabuluhang" epekto sa pagitan nila. Ayon sa resulta na ang Interaktibong Laro ay nakatutulong sa Pagpapaulad at Pagkatuto ng Filipino.

Gayundi ang haypotesis na "Walang Makabuluhang Kauugnayan ang Antas ng Pangkalahatang Pagsusulit sa Pagganap ng mga Mag-aaral" ay huwag tanggapin, ipinapakita nito na "may makabuluhang" kaugnayan ang antas ng pangkalahatang pagsusulit sa pagganap ng mga mag-aaral. Ayon sa resulta nakatutulong ang pangkalahatang pagsusulit sa pagkatuto at pagpapaulad ng kaalaman ng mga mag-aaral.

Hango sa kinalabasan at konklusyon ng pag-aaral, iminumungkahi ng mananaliksik ang rekomendasyon para sa mga susunod na mananaliksik ay hinihimok na susugan ang isinasagawang pag-aaral upang mas mapaulad ang antas ng pagganap ng mga mag-aaral sa kanilang kakayahang komunikatibo. Ang ginawang kagamitan sa pagtuturo ay maaring maging gabay at gawing interaktibo sa pagtuturo at pagkatuto ng Filipino ng mga mag-aaral.

SUSING SALITA: B-kard; Interaktibong Laro; Kawilihan sa Pagkatuto

1. PANIMULA

Sa pamamagitan ang pagsusuri ng mga konkreto at epektibong estratehiya, na may na makakalap ng datos na maglalarawan kung paano nakakatulong ang mga ito sa pagpapalalim ng kaalaman at pagpapataas ng motibasyon ng mga mag-aaral. Sa kahulugan, Ito ay isang pagsusuri sa pagsasanib ng teorya at

praktika ng pagtuturo upang maitaas ang antas ng edukasyon sa lipunan.

Ngayon ang kawalang-interes sa paaralan ay isang seryosong problema na bahagi ng edukasyon ngayon. Ay tungkol sa mag-aaral na nagpapakita ng mahusay na hindi interesado sa lahat ng bagay na nauugnay sa pag-aaral. Ang kawalang-interes na



paaralan ay maaaring lumitaw sa iba't ibang paraan: mula sa mga bata na abala sa klase at makagagambala sa kanilang mga kamag-aral, kahit na sa pamamagitan ng "kawalan ng kaisipan", Na nangangahulugang pisikal na naroroon ang bata kahit na ang kanyang isip ay gumagala sa ibang mga lugar o saloobin. Maaari ring lumitaw ang kawalang-interes sa paaralan pagdating sa mga bata na nakatuon sa kanilang sariling mga alalahanin at problema, na humantong sa kanila na palayo sa kung ano ang nangyayari sa mga silid-aralan (Almiron, 2019)

Malaki ang ambag ng mabisang estratehiya sa larangan ng pagkatuto ng mga mag-aaral, at nasa kamay ng kaguruan ang mga paraan at hakbang upang ito ay maisakatuparan. Tungkulin ng guro na magampanan ang kanilang gawain sa pamamagitan ng paglikha ng mabisang estilo ng pagtuturo, tulad na lamang ng paggamit ng laro sa loob ng klase. Kaugnay nito, marami na rin ang umuusbong na mga nakagaganyak na iba't ibang laro bilang estratehiya dahil napatunayang mas nagiging aktibo ang bata sa pakikilahok sa klase kapag may mga laro. (Hart et al. 2020)

Paliwanag nga ni Panganiban (2019) ilan sa mga suliranin ng guro sa pagtuturo ng Filipino ay kakulangan sa kaalaman sa mga makabagong pamamaraan o istratheyang pampagtuturo, kakulangan sa mga makabagong kagamitang pampagtuturo, ang kawalan ng interes ng mga mag-aaral sa pagbabasa ng mga akdang pampanitikan, ang mahinang kakayahan ng mga mag-aaral sa pakikinig at iba pa. Ilan lamang ito sa mga nagiging suliranin ng guro pagdating sa pagtuturo ng Filipino.

Ang pag-aaral na ito ay naglalayong masusing suriin ang epekto ng paggamit makabagong estratehiya na B-Kard sa pagkatuto sa pag-usbong ng interes ng mga mag-aaral. Sa pamamagitan ng pagsusuri sa kahalagahan ng mga estratehiya sa pagtuturo, nais nating maunawaan kung paano ito nakakatulong sa pagbuo at pagpapalawak ng interes ng mga mag-aaral sa iba't ibang larangan ng edukasyon higit sa pagtuturo ng baybayin sa mga mag-aaral.

1.1 Paglalahad ng Suliranin

Ang pag-aaral na ito ay ginabayan ng mga sumusunod na katanungan:

1. Ano antas ng Interaktibong B-kard sa kawilihan sa pagkatuto sa Baybayin ng mga mag-aaral batay sa:
 - 1.1 Kagamitan sa paglalaro;
 - 1.2 Mekaniks;
 - 1.3 Pag-uugali sa pagkatuto;
 - 1.4 Pamamahala sa pagkatuto; at
 - 1.5 Pakikilahok
2. Ano ang antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa
 - 2.1 Pagbuo ng Salita;
 - 2.2 Pagsulat ng baybayin; at
 - 2.3 Pagbasa?
3. Ano ang pagganap sa pagkatuto ng B-Kard sa mga mag-aaral batay sa pagbabaybay at pagsasalin?
4. May makabuluhang epekto ba ng Paggamit ng B-kard sa kawilihan sa pagkatuto sa baybayin ng mga mag-aaral sa pagganap ng mga mag-aaral?

5. May makabuluhang epekto ba ang Pag-unawa sa Baybayin sa pagganap ng mga mag-aaral?

6. Anong planong gawain ang imumungkahi batay sa kinalabasan ng pagsusuri?

2. METODOLOHIYA NG PANANALIKSIK

Ang disenyong gagamitin ng mananaliksik sa pag-aaral na ito ay deskriptibong paraan. Ang palarawang pananaliksik ay mga kaganapan sa pag-aaral ay kinapapalooban ng pagtatala, paglalarawan, pagpapakahulugan, pagsusuri at paghahambing. Layunin ng ganitong disenyo na sistematikong mailarawan ang sitwasyon at kundisyon nang makatotohanan at buong katiyakan.

Ayon sa harappa (2017), Ang deskriptibong pananaliksik ay tumutukoy sa mga tanong, disenyo ng pag-aaral at pagsusuri ng mga datos na isinagawa sa isang partikular na paksa. Ito ay isang mahigpit na obserbasyonal na pamamaraan ng pananaliksik na walang impluwensya sa mga variable.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay tumutukoy sa paglalahad sa mga nakalap na datos. Ito ay binigyan ng kaukulang presentasyon. Analisis at Interpretasyong pagpapakahulugan sa pamamagitan ng mga talahanayan upang mabigyang ng kasagutan ang mga inilahad na suliranin sa pag-aaral na ito. Ang bawat impormasyong nakuha ay inilahad nang maayos sa mga talahanayan

Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Kagamitan sa paglalaro

Sa pag-aaral na ito ay nagpapakita ng larong kawilihan bilang kagamitan sa pagkatuto at pag-unawa sa baybayin na naglalaman ng Mekaniks, Kaangkupan at Kawilihan.

Ipinaliwanag ang bawat datos sa pamamagitan ng mga pahayag, mean, SD at pahayag upang lubos na maunawaan ang kinalabasan ng pag-aaral. Ang talahanayan 1 ay antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa kagamitan sa paglalaro ay *ang mga kulay at disenyo ay umaakma sa materyales na ginamit* na antas ng paggamit at pag-unawa ng mga tagatugon at nakakuha ng ($M=4.92$, $SD=0.30$), *magaan at madaling laruin ng mga mag-aaral* at nakakuha ng ($M=4.89$, $SD=0.42$). Bagaman napansin na lubhang mataas na antas ng Paggamit ng B-kard, ang pahayag na may pinakamababang marka ay ang nagbibigay ng tiyak at tamang paraan kung paano manalo o matalo sa laro at mayroong ($M = 4.83$, $SD = 0.41$).

May kabuoang mean na 4.87, standard deviation na 0.23 at ipinapakita na ang antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Kagamitan sa paglalaro ay may puna na lubos na lubos na nakatutulong at literal na paliwanag na lubhang mataas.

Makikita sa talahanayan 1 ay nagsasaad ng antas ng paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa kagamitan sa paglalaro



Talahanayan 1. Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Kagamitan sa paglalaro

Mga Pahayag	Mean	SD	Puna
<i>Magaan at madaling laruin ng mga mag-aaral.</i>	4.89	0.32	Lubos na nakatutulong
<i>Nagpapakita ng koneksyon at kaugnayan sa BKARD.</i>	4.87	0.34	Lubos na nakatutulong
<i>Nagbibigay ng tiyak at tamang paraan kung paano manalo o matalo sa laro..</i>	4.83	0.41	Lubos na nakatutulong
<i>Naipakikita ang pagiging patas sa laro at pantay ang pagbibigay ng alintuntunin sa paglalaro.</i>	4.86	0.35	Lubos na nakatutulong
<i>Ang mga kulay at disenyo ay umaakma sa materyales na ginamit.</i>	4.92	0.30	Lubos na nakatutulong

Overall Mean: 4.87

Standard Deviation: 0.23

Literal na paliwanag: Lubhang Mataas

Ginagawa ang kagamitan sa laro upang matulungan ang mga manlalaro kapag naglalaro. Ang mga manlalaro ng laro ay magiging mas komportable sa paglalaro ng mga laro kung gumagamit sila ng kagamitan sa laro. Karaniwang ginagamit ang kagamitan sa paglalaro sa mga larong may temang nakakapanabik o nagbibigay ng interes ng mga mag-aaral. Ang kagamitan sa paglalaro ay mahalaga upang mas

mapaunlad pa ang kakayahan ng mga mag-aaral, sa pagtuturo ang disenyo at anyo ng kagamitan ay nakakapukaw sa atensyon ng mga mag-aaral.

Makikita sa talahanayan 2 ay nagpapakita ng Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Mekaniks.

Talahanayan 2. Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Mekaniks

Mga Pahayag	Mean	SD	Puna
<i>Naiintindihan batay sa antas ng kakayahan ng mga mag-aaral.</i>	4.89	0.32	Lubos na nakatutulong
<i>Ang mga mekaniks ay konektado lahat sa mga panuntunan ng laro.</i>	4.87	0.35	Lubos na nakatutulong
<i>Malinaw na alintuntunin sa pagbuo ng laro.</i>	4.81	0.41	Lubos na nakatutulong
<i>Naiiwasang bigyan ng kalituhan ang mga mag-aaral tungkol sa mga tuntunin at mekaniks ng laro.</i>	4.79	0.42	Lubos na nakatutulong
<i>Naibibigay sa mga mag-aaral ng maayos at tiyak na mga layunin sa laro at ang aralin na mayroon sila.</i>	4.89	0.34	Lubos na nakatutulong

Overall Mean: 4.85

Standard Deviation: 0.24

Literal na paliwanag: Lubhang Mataas

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang isang daan at limampu na mga mag-aaral ng Laguna Univeristy at ang datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas”.

paggamit na may pinakamababang antas ang *Naiiwasang bigyan ng kalituhan ang mga mag-aaral tungkol sa mga tuntunin at mekaniks ng laro* ang resulta ay (M=4.79, SD=0.42).

Sa kabuuan, may mean na 4.85 at standard deviation na 0.24, na nagpapakita na ang antas ng paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa mga mekaniks ay lubos na nakatutulong at lubhang mataas, ayon sa kaangkupan. Ang resulta ay nagpapatunay sa kahalagahan ng ugnayan sa aralin sa proseso ng pagkatuto.

Makikita sa talahayan 3 na nagsasaad ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pag-uugali sa Pagkatuto.

Ang Talahanayan 2 ay nagpapakita ng antas ng paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa mga mekaniks na may angkop na mataas na antas ng paggamit, kasabay ng pananaw ng mga tagatugon. *Naiintindihan batay sa antas ng kakayahan ng mga mag-aaral*, na may nakamit na markang (M=4.89, SD=0.32), *Naibibigay sa mga mag-aaral ng maayos at tiyak na mga layunin sa laro at ang aralin na mayroon sila* habang ay umabot sa (M=4.89, SD=0.34) Bagaman napansin ng lubos na nakakatulong ang antas ng



Talahanayan 3. Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pag-uugali sa pagkatuto.

Mga Pahayag	Mean	SD	Puna
<i>Nakikilala ang sariling istilo at kasanayan sa pagkatuto na nakakatulong sa pagbuo ng mga motibasyon at interes sa pag-aaral.</i>	4.92	0.27	Lubos na nakatutulong
<i>Gumagamit ng maraming representasyon ng mga ideya at konsepto upang matuto nang higit pa tungkol sa aralin.</i>	4.81	0.44	Lubos na nakatutulong
<i>Isinasaalang-alang ng BKARD game ang mga opinyon at ideya ng mga mag-aaral sa proseso ng pag-aaral.</i>	4.85	0.37	Lubos na nakatutulong
<i>Nakakatulong ito sa pagpapalakas ng kanilang pakikiisa sa pagkatuto ng Baybayin.</i>	4.86	0.35	Lubos na nakatutulong
<i>Nahihikayat na mag-aral na mag-isa at napapahusay pa ang pag-uugali sa pag-aaral sa pagkatuto sa Baybayin.</i>	4.89	0.31	Lubos na nakatutulong

Overall Mean: 4.87

Standard Deviation: 0.23

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 3 ay antas ng paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pag-uugali sa pagkatuto literal na paliwanag na *lubhang mataas* na antas ng paggamit at sa pananaw ng mga tagatugon, *Nakikilala ang sariling istilo at kasanayan sa pagkatuto na nakakatulong sa pagbuo ng mga motibasyon at interes sa pag-aaral* ay nakakakuha ng (M=4.92, SD=0.27) at nagpapakita ng *Nahihikayat na mag-aral na mag-isa at napapahusay pa ang pag-uugali sa pag-aaral sa pagkatuto sa Baybayin* ay mayroong (M=4.89,SD=0.31).

Bagaman napansin na *lubhang mataas* na antas ng paggamit, ang pahayag na may pinakamababang marka ay *nagpapakita ng pagiging simple ngunit makabuluhan ay mayroong* (M=4.81, SD=0.44).

May kabuuang mean na 4.87, standard deviation na 0.23 at ipinapakita na ang antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pag-uugali sa pagkatuto ay lubos na nakatutulong at literal na paliwanag na *lubhang mataas*. Ang kalinawan ay mahalaga sa isang laro upang maunawaan ang tunguhin ng isang laro sa isang aralin.

Ang mga mag-aaral na regular na nakikilahok sa klase ay patuloy na kasangkot sa pagbuo ng material at mas higit na matatandaan ang mas malaking bahagi ng impormasyon. Ang aktibong pakikilahok sa klase ay nagpapabuti din ng kritikal at mas mataas na antas ng mga kasanayan sa pag-iisip.

Makikita sa talahanayan 4 ay nagpapakita ng . antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pamamahala sa Pagkatuto

Talahanayan 4. Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pamamahala sa pagkatuto

Mga Pahayag	Mean	SD	Puna
<i>Nasusubaybayan ng BKARD game ang pagsusumikap at progreso ng bawat mag-aaral.</i>	4.81	0.41	Lubos na nakatutulong
<i>Nakapagbigay ng BKARD game ang feedback sa mga guro tungkol sa performance ng buong klase</i>	4.81	0.40	Lubos na nakatutulong
<i>Nalilintang sa kahusayan sa pag-unawa.</i>	4.82	0.45	Lubos na nakatutulong
<i>Naipapakita ang pagsusulat sa Baybayin.</i>	4.81	0.44	Lubos na nakatutulong
<i>Malinaw ang mga panuto o instruksiyon nito.</i>	4.84	0.37	Lubos na nakatutulong

Overall Mean: 4.82

Standard Deviation: 0.28

Literal na paliwanag: Lubhang Mataas

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang isang daan at limampu na mga mag-aaral ng Laguna Univeristy at ang datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas”.

Ang talahanayan 4 ay nagsasaad ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa

pamamahala sa pagkatuto batay sa paglalaro ng mga mag-aaral ayon sa Disenyo ay may literal na paliwanag na *lubhang mataas*, *Malinaw ang mga panuto o instruksiyon nito* ay nakakuha ng (M=4.84, SD=0.37) at *Nasusubaybayan ng BKARD game ang pagsusumikap at progreso ng bawat mag-aaral* ay mayroong (M=4.81, SD=0.41).

May kabuuang mean na 4.82, standard deviation na 0.28 at



ipinapakita na ang antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pamamahala sa pagkatuto ay may puna na lubos na nakatutulong at literal na paliwanag na lubhang mataas. Nararapat din maisaalang-alang ang pagkatuto ng mga mag-aaral sa pagsulat at pagbasa sa baybayin.

Kaugnay ng mga resulta sa itaas, kinakailangang malaman kung may natutuhan ang isang mag-aaral sa isang uri ng

babasahin. Kaakibat nito ang parte sa polyeto na paglalapat kung saan makikita ang mga katanungan at pagpapalawak pa sa isang aralin. Nakatutulong ito upang maging mabisa ang pagkatuto ng isang mag-aaral.

Makikita sa talahanayan 5 ay nagsasaad ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pakikilahok

Talahanayan 5. Antas ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa Pakikilahok

Mga Pahayag	Mean	SD	Puna
<i>Nagkakaroon ng interes ang mga mag-aaral sa BKARD.</i>	4.87	0.35	Lubos na nakatutulong
<i>Natutulong makisalamuha sa ibang tao at pakikipagtulungan sa kagrupo.</i>	4.82	0.40	Lubos na nakatutulong
<i>Nagagawa ang brainstorming at pagbabahagi ng mga ideya sa ibang tao sa paligid.</i>	4.84	0.39	Lubos na nakatutulong
<i>Naigagalang ang iba pang opinion tungo sa tiyak na ideya.</i>	4.83	0.40	Lubos na nakatutulong
<i>Nagpapakita ng aktibong pakikilahok, pakikinig at lumilikha ng maayos na relasyon sa kagrupo.</i>	4.89	0.31	Lubos na nakatutulong

Overall Mean: 4.85

Standard Deviation: 0.26

Literal na paliwanag: Lubhang Mataas

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang isang daan at limampu na mga mag-aaral ng Laguna Univeristy at ang datos na nalikom ay binigyang interpretasyon ng mananaliksik bilang “Lubhang Mataas”.

Ang pag-aaral na ito ay naglalaman ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pakikilahok. Nagpapakita din ng pagiging aktibo ang mga mag-aaral sa pakikinig at lumilikha ng maayos na relasyon sa kagrupo *lubhang mataas* na antas sa paggamit ng ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pakikilahok nakakuha ng (M=4.89, SD=0.31) at nagkakaroon ng interes ang mga mag-aaral sa b-kard mayroong (M=4.87, SD=0.35)

Bagaman napansin na *lubhang mataas* na antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral ang pahayag na may pinakamababang marka ay ang *pakikipagtulungan sa kagrupo* ay naaayon sa mga layunin at kakayahan sa pagkatuto na mayroong (M=4.82,SD=0.40)

May kabuuang mean na 4.85, standard deviation na 0.26 at ipinapakita na ang ng antas ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral batay sa pakikilahok ay may puna na lubos na nakatutulong at literal na paliwanag na lubhang mataas.

Antas ng Pag-unawa sa Baybayin

Ang pag-aaral na ito ay naglalaman Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay, Pagbuo ng Salita, Pagsulat ng Baybayin, Pagbasa.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Pahayag, Mean at Standard Deviation upang higit na

mailarawan ang kinalabasan ng pag-aaral na ito.

Sa unang pahayag na “*Nakakatulong magpalawak ng bokabularyo sa mga mag-aaral sa Baybayin*” ay nakakuha ng mean iskor na 4.79 at standard deviation na 0.48 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Nangangahulugan lamang, na lubos sumasang-ayon ang mga tagatugon na napalalawak sa pag-unawa sa baybayin.

Sa ikalawang pahayag na “*Nakaayon sa mga kakayahan sa pagkatuto ng aralin*” ay nakakuha ng mean isko na 4.79 at standard deviation na 0.51 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon ang mga tagatugon ibig sabihin kasiya-siya ang binibigay ng b-kard sa pag-aaral ng baybayin ng mga mag-aaral.

Sa ikatlong pahayag na “*Napagtutuunan ng pansin ang koneksyon ng mga layunin sa aralin at layunin ng pagkatuto.*” Ay nakakuha ng mean iskor 4.87 at standard deviation na 0.34 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon.

Sa ikaapat na pahayag na “*Nagpapakita ng pagiging simple at natural ang mga salitang ginamit.*” Ay nakakuha ng mean iskor na 4.80 at standard deviation na 0.46 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-ayon. Kaya’t nangangahulugan lamang itong namumulat sa pagbabasa at pagsusulat ng baybayin.

At sa ikalimang pahayag na “*Nagbibigay suporta ang BKARD game sa pag-unlad ng kasanayan sa pagsusulat ng mga mag-aaral, lalo na sa konteksto ng Baybayin.*” Ito’y nakakuha ng mean iskor na 4.82 at standard deviation na 0.43 na may deskripsyon na lubhang mataas at puna na lubos na sumasang-



ayon. Ibig sabihin nito ay mas napapaunlad ang pagsusulat ng baybayin o ang pag-aaral nito.

Makikita sa talahanayan 6 ay nagpapahayag ng antas ng pag-unawa sa baybayin ng mga mag-aaral batay sa Pagbuo ng mga Salita.

Talahanayan 6. Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagbuo ng mga salita

Mga Pahayag	Mean	SD	Puna
<i>Nakakatulong magpalawak ng bokabularyo sa mga mag-aaral sa Baybayin</i>	4.79	0.48	Lubos na nakatutulong
<i>Nakaayon sa mga kakayahan sa pagkatuto ng aralin.</i>	4.79	0.51	Lubos na nakatutulong
<i>Napagtutuunan ng pansin ang koneksyon ng mga layunin sa aralin at layunin ng pagkatuto.</i>	4.87	0.34	Lubos na nakatutulong
<i>Nagpapakita ng ng pagiging simple at natural ang mga salitang ginamit.</i>	4.80	0.46	Lubos na nakatutulong
<i>Nagbibigay suporta ang BKARD game sa pag-unlad ng kasanayan sa pagsusulat ng mga mag-aaral, lalo na sa konteksto ng Baybayin.</i>	4.82	0.43	Lubos na nakatutulong

Overall Mean: 4.81

Standard Deviation: 0.30

Literal na paliwanag: Lubhang Mataas

Ipinaliwanag ang bawat datos sa pamamagitan ng mga pahayag, mean, Standard Deviation at pahayag upang lubos na maunawaan ang kinalabasan ng pag-aaral.

mayroong ($M=4.80, SD=0.46$).

Ang talahanayan 6 ay nagsasaad ng antas ng pag-unawa sa baybayin ng mga mag-aaral batay sa pagbuo ng mga salita na may literal na paliwanag na *lubhang mataas* sa antas ng pag-unawa, *Napagtutuunan ng pansin ang koneksyon ng mga layunin sa aralin at layunin ng pagkatuto* ay may ($M=4.87, SD=0.34$) At ang pangalawa na nakakuha ng may pinakamataas na lubos na nakatutulong na may pahayag na *Nagbibigay suporta ang BKARD game sa pag-unlad ng kasanayan sa pagsusulat ng mga mag-aaral, lalo na sa konteksto ng Baybayin* ay may ($M=4.82, SD=0.43$) at ang pahayag na may pinakamababang marka ay nagpapakita ng pagiging simple at natural ang mga salitang ginamit ay

May kabuuang mean na 4.81, standard deviation na 0.30 at ipinapakita na ang antas ng pag-unawa sa baybayin ng mga mag-aaral batay sa pagbuo ng mga salita ay may puna na lubos na nakatutulong at literal na paliwanag na *lubhang mataas*. Lumabas sa pag-aaral na maaaring nakahubog sa pag-unawa sa baybayin ang paggamit ng b-kard sa pagtuturo.

Batay sa kinalabansang resulta sa itaas masasabi ng mananaliksik na ang ginamit ay lubos na nakatulong sa pagbuo ng mga salita.

Makikita sa talahanayan 7 ay antas ng pag-unawa sa baybayin ng mga mag-aaral batay sa Pagsulat ng Baybayin

Talahanayan 7. Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagsulat ng Baybayin

Mga Pahayag	Mean	SD	Puna
<i>Nagbibigay ng gabay upang maayos na masulat ang Baybayin.</i>	4.79	0.47	Lubos na nakatutulong
<i>Nakakatulong sa pagsasanay ng mga mag-aaral sa pagbuo ng mga salita gamit ang Baybayin.</i>	4.73	0.58	Lubos na nakatutulong
<i>Humanap ng oras para mag-explore at nag-aaral nang higit pa para mapabuti ang mga kalakasan at kahinaan sa pagsulat ng Baybayin.</i>	4.84	0.42	Lubos na nakatutulong
<i>Naiugnay ng BKARD game ang pagsulat ng Baybayin sa iba't ibang aspekto ng pagkatuto tulad ng kasanayan sa wika, kasaysayan, at kultura</i>	4.79	0.51	Lubos na nakatutulong
<i>Nakakatulong ang BKARD game ang mga mag-aaral na maipakita ang kanilang kakayahan sa pagsusulat ng Baybayin sa pang-araw-araw na sitwasyon.</i>	4.84	0.37	Lubos na nakatutulong

Overall Mean: 4.80

Standard Deviation: 0.36

Literal na paliwanag: Lubhang Mataas

Naglahad ang mananaliksik ng mga pahayag at sinagutan ito ng mga mag-aaral sa lahat ng antas na may kabuuang isang daan at limampu na mga mag-aaral ng Laguna Univeristy at ang datos na nalikom ay binigyang interpretasyon ng mananaliksik

bilang “Lubhang Mataas”.

Ang talahanayan 7 ay nagsasaad ng antas ng pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagsulat ng baybayin sa



pagpapaunlad sa pagsulat ng baybayin na may literal *lubhang mataas* na antas ng pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagsulat ng baybayin na nakakatulong sa pagsasanay ng mga mag-aaral sa pagbuo ng mga salita gamit ang baybayin ay nakakuha na ($M=4.73, SD=0.58$) at natutong makipag-ugnayan at nakakatulong din ang b-kard game para maipakita ang kanilang kakayahan sa pagsusulat ng baybayin sa pang-araw-araw na sitwasyon mayroong ($M=4.84, SD 0.37$).

Bagaman napansin na *lubhang mataas* na antas ng pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagsulat ng baybayin, ang pahayag na may pinakamababang marka ay nagbibigay ng

gabay upang maayos na masulat ay mayroong ($M=4.73, SD 0.58$).

Sa kabuuang mean na 4.80, standard deviation na 0.36 at ipinapakita na ang antas ng pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagsulat ng baybayin ay may puna na lubos na nakatatulong at literal na paliwanag na *lubhang mataas*. Nagkakaroon ng pakikilahok sa klase at pakikipag-ugnayan sa mga mag-aaral.

Makikita sa talahanayan 8 ay naglalahad ng antas ng pag-unawa sa baybayin ng mga mag-aaral batay sa Pagbasa

Talahanayan 8. Antas ng Pag-unawa sa Baybayin ng mga mag-aaral batay sa Pagbasa

Mga Pahayag	Mean	SD	Puna
<i>Napapaunlad ang kaalaman at kamalayan sa pagbasa sa baybayin.</i>	4.85	0.35	Lubos na sumasang-ayon
<i>Napapayabong ang kaalaman hinggil sa BKARD.</i>	4.79	0.47	Lubos na sumasang-ayon
<i>. Naibabahagi ang mga kaalamang napulot sa pagbabasa sa mga salitang baybayin.</i>	4.74	0.52	Lubos na sumasang-ayon
<i>Naiiugma ng BKARD game ang pagsasanay sa pagbasa ng Baybayin sa iba't ibang aspekto ng pagkatuto tulad ng kasanayan sa wika, kasaysayan, at kultura</i>	4.77	0.50	Lubos na sumasang-ayon
<i>Nagtataguyod ng mataas na antas ng pagganap ng mag-aaral.</i>	4.84	0.48	Lubos na sumasang-ayon

Overall Mean: 4.80

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Talahanayan 8. Resulta ng pagkatuto ng B-Kard mga mag-aaral batay sa pauna at panapos ng Pagsusulit.

Marka	Frequency	Percentage	Mapaglarawang Katumbas
17 - 20	23	15.33	Pinakamahusay
14 - 16	127	84.67	Higit na Mahusay
11 - 13	0	0.00	Mahusay
8 - 10	0	0.00	Katamtamang Husay
5 - 7	0	0.00	Di-gaanong mahusay
0 - 4	0	0.00	Hindi Mahusay

Total 150 100

Weighted Mean 15.77

Pinakamababang Marka 15

Pinakamataas na marka 20

Standard Deviation 1.81

Lubhang Kasiya-siya

Talahanayan bilang walo ay nagpapakita ng resulta ng pagkatuto ng B-Kard mga mag-aaral batay sa pauna at panapos na pagsusulit, sa kabuoang isang daan at limampu na tagatugon, ang marka na "14 - 16" ay nakakuha ng pinakamataas na bilang na isang daan at dalawampung-pito (127) o 84.67% ng kabuoang tumugon at may mapaglarawang katumbas na *Malapit at halos pumantay sa Pinakamahusay*. Habang ang marka na "17 - 20" ay nakakuha ng pinakamababang bilang na dalawampung-tatlo (23) o 15.33% ng kabuoang tumugon at may mapaglarawang katumbas na *Mahusay*.

May kabuoang (*Weighted Mean = 15.77, SD = 1.81*) at (*pinakamababang marka = 15, pinakamataas na marka = 20*)

ipinapakita na ang resulta ng pagkatuto ng B-Kard mga mag-aaral batay sa pauna at panapos na pagsusulit ay may mapaglarawang katumbas na *Malapit at halos pumantay sa Mahusay* at may literal na paliwanag na *Lubhang Kasiya-siya*.

Ayon kay Bernales et, al (2013) ang pagbasa ay pagbibigay ng kahulugan o pangunawa sa mga simbulong nakalimbag. Dahil ito ang daluyan upang matuto o matamo ang iba't ibang kaalaman. Tulad sa baybayin, ang mga simbolo ng bawat titik na pinagsamasama ay nakakabuo ng bawat kahulugan ayon sa paraan ng pagkakasulat na siyang nagbibigay na karunungan at kaalaman sa mambabasa.



Ipinapaliwanag ang bawat datos sa pamamagitan ng mga marka, frequency, percentage at mapaglarawang katumbas upang lubos na maunawaan ang kinalabasan ng pag-aaral.

Antas ng Pagganap ng mga Mag-aaral

Ang pag-aaral na ito ay naglalaman ng resulta ng pagganap ng mga mag-aaral batay sa mapanuring pag-iisip at pag-aanalisa.

Sa pagkuha ng resulta, makikita ang mga sumusunod na talahanayang . ito ay may Marka, Frequency, Percentage at Pangkalahatang mapaglarawang katumbas. Makikita rin ang Weighted Mean, Pinakamababa't Pinakamataas na Marka at Standard Deviation upang higit na malaman ang kinalabasan ng pananaliksik.

Makikita sa talahanayan 9 ay naglalahad ng antas ng pagganap ng mga mag-aaral sa pangkalahatang pagsusulit.

Talahanayan 9. Makabuluhang epekto ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral

Pagganap	B	SE	β	t	p
Constant	15.62	3.541		4.413*	0.000
Kagamitan sa paglalaro		1.031	1.589	1.541	0.126
Mekaniks		0.939	-1.365	-1.454	0.148
Pag-uugali sa pagkatuto		1.118	-0.586	-0.524	0.601
Pamamahala sa pagkatuto		0.178	-0.096	-0.539	0.591
Pakikilahok		0.837	0.483	0.578	0.564
R-squared			.029		
Adjusted R-squared			-.005		
Standard Error of the Estimate		1.812			
F(5, 144)				.852	.515

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto sa Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral. Ang *regression model* ay nagpapaliwanag ng 2.9% ng *variance* sa pagganap ng mga mag-aaral (R-squared = 0.029). Ang *Kagamitan sa paglalaro, Mekaniks, Pag-uugali sa pagkatuto, Pamamahala sa pagkatuto at Pakikilahok* ay walang positibong epekto sa pagganap ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan (F (5, 144) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Makabuluhang epekto ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral.

Ang pag-aaral na ito ay naglalaman ng makabuluhang epekto ng paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral.

Sa pagkuha ng resulta makikita sa talahanayang ito ang Kagamitan sa paglalaro, Mekaniks, Pag-uugali sa pagkatuto, Pamamahala sa Pagkatuto, at Pakikilahok. Tinuos sa pamamagitan ng Beta, Standard Error, Beta, Coefficient, T-Value, at P-Value.

Makikita sa talahanayan siyam ang makabuluhang epekto ng paggamit ng b-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral.

Base sa datos na nakalap, ipinapakita nito na hindi makabuluhan ang Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto ng Paggamit ng B-kard sa kawilihan sa pagkatuto ng mga mag-aaral sa pagganap ng mga mag-aaral” ay huwag tanggapin, ipinapakita nito na walang epekto sa pagitan nila.

Makikita sa Talahanayan 10 ang Resulta ng Pagganap ng mga Magaaral batay sa Pag-aanalisa.

Talahanayan 10. Makabuluhang epekto ng Pag-unawa sa Baybayin sa ng mga mag-aaral

Pagganap	B	SE	β	t	p
Constant	15.57	2.477		6.287*	0.000
Pagbuo ng Salita		0.699	0.004	0.005	0.996
Pagsulat ng baybayin		0.658	-0.417	-0.634	0.527
Pagbasa		0.723	0.453	0.626	0.532
R-squared			.003		
Adjusted R-squared			-.017		
Standard Error of the Estimate		1.823			
F(5, 180)				.169	.917

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto sa Pag-unawa sa Baybayin sa

pagganap ng mga mag-aaral. Ang *regression model* ay nagpapaliwanag ng 0.3% ng *variance* sa pagganap ng mga



mag-aaral ($R\text{-squared} = 0.003$). Ang *Pagbuo ng Salita, Pagsulat ng baybayin at Pagbasa* ay walang positibong epekto sa pagganap ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan ($F(5, 144) p > 0.05$), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Base sa datos na nakalap, ipinapakita nito na hindi makabuluhan ang Pag-unawa sa Baybayin sa pagganap ng mga mag-aaral at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto ng Pag-unawa sa Baybayin sa pagganap ng mga mag-aaral” ay huwag tanggapin, ipinapakita nito na walang epekto sa pagitan nila.

4. KONKLUSYON AT REKOMENDASYON

Batay sa kinalabasan ng pag-aaral na ito ang kongklusyon ang nabuo:

Ang haypotesis na ang kabanata 1 na “Walang makabuluhang epekto ang Interaktibong Laro sa Kawilihan bilang sa Pagkatuto at Pag-unawa sa Baybayin sa Pagganap ng mga mag-aaral.” Ay huwag tanggapin, ipinapakita nito na may “makabuluhang” epekto sa pagitan nila. Ayon sa resulta na ang Interaktibong Laro ay nakatutulong sa Pagpapaunlad at Pagkatuto ng Filipino.

Gayundin ang haypotesis na “Walang Makabuluhang Kaugnayan ang Antas ng Pangkalahatang Pagsusulit sa Pagganap ng mga Mag-aaral” ay huwag tanggapin, ipinapakita nito na “may makabuluhang” kaugnayan ang antas ng pangkalahatang pagsusulit sa pagganap ng mga mag-aaral. Ayon sa resulta nakatutulong ang pangkalahatang pagsusulit sa pagkatuto at pagpapaunlad ng kaalaman ng mga mag-aaral. Hango sa kinalabasan at kongklusyon ng pag-aaral, iminumungkahi ng mananaliksik ang mga sumusunod na rekomendasyon.

1. Pagpapalawak ng Lugar at Gamit ng B-Kard: Mahalaga na pag-aralan kung paano pa maaaring gamitin ang B-Kard hindi lamang sa loob ng silid-aralan kundi maging sa iba't ibang larangan ng pag-aaral at pang-araw-araw na buhay.
2. Ang ginawang kagamitan sa pagtuturo ay maaaring maging gabay at gawing interaktibo sa pagtuturo at pagkatuto ng Filipino ng mga mag-aaral.
3. Magbuo ng mga module at pagsasanay sa tamang paggamit ng B-Kard sa pagsulat at pagbabasa. Ang regular na pagsasanay ay magpapalawak ng kasanayan ng mga mag-aaral at maaaring mag-udyok ng mas malawak na pagtanggap sa tradisyonal na alpabetong Filipino.

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HEURISTIC APPROACH ON THE LEARNERS' READING COMPREHENSION SKILLS AND MATHEMATICAL ABILITIES

Airamae Rebanco Palero

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The main objective of this study is to explore the heuristic approach on the learners' reading comprehension skills and mathematical abilities. Specifically, it determines the level of utilization of heuristic approach, reading comprehension skills, and mathematical abilities of the learners. Also, it regulates the effect of utilization of heuristic approach on learners' reading comprehension skills and mathematical abilities.

The study's research design is descriptive method. The respondents for this study are sixty-three (63) Grade 6 students from Sto. Angel Norte Elementary School in the school year 2023-2024. The primary tool for data collection is a survey questionnaire developed by the researcher. Additionally, an adopted test question from Phil-IRI and a teacher-created test is utilized to assess the students' reading comprehension and mathematical abilities.

Findings revealed a high level in the the utilization of heuristic approach across different level. Likewise, the result of learners' reading comprehension in terms of inferential comprehension and critical comprehension is proficient while literal comprehension was marked approaching proficient. Results on the level of learners' mathematical abilities, demonstrated expertise in numeracy skills obtaining approaching proficient while critical thinking obtain proficient, and problem-solving obtaining approaching proficient. Utilization of heuristics approach has no significant effect to learners' reading comprehension skills and it also revealed that there is no significant effect in the utilization of heuristic approach to learners' mathematical abilities.

There is no effect on the utilization of heuristic approach to the learners' reading comprehension skills and mathematical abilities thus both the hypothesis is accepted. Based on the findings of this study, it is evident that further research is necessary to explore the complexities of the relationship between heuristic approaches and academic outcomes, informing instructional practices and curriculum development in both literacy and mathematics education.

Based on the results, considering how well heuristic techniques are thought to encourage creativity, innovation, and critical thinking, educational institutions may think about incorporating heuristic methodology into their curriculum design. Teachers may get training from these programs on how to use heuristic techniques to their education. Educational institutions may cultivate a feedback culture in their learning settings because of the significance of feedback in bolstering the usefulness of heuristic approach in problem-solving. Future research and assessment may be carried out in order to expand on the results of this study and improve our comprehension of the connection between heuristic techniques and academic achievements

KEYWORDS: heuristic approach; reading comprehension skills; mathematical abilities

1. INTRODUCTION

The heuristic method, which emphasizes the development of independent thinking and problem-solving abilities, is a break from routine learning. It is crucial to comprehend the wider difficulties of heuristic learning as educational institutions throughout the world struggle to prepare pupils for a world that is becoming more complicated.

Moving beyond traditional pedagogical models, this study examines the systemic impact of incorporating heuristic approaches in educational curricula. It explores how educational policies and frameworks can be adapted to accommodate heuristic learning strategies, considering the diverse needs of learners. By mapping the macro development, this research contributes to the ongoing discourse on educational reform and offers insights into the potential shifts in teaching paradigms to enhance overall cognitive development.

A child's capacity to succeed in each math lesson may differ based on his unique strengths and weaknesses (Hodnett, 2014). Hence, to address problems, one must exercise critical thinking, never give up, and come up with or apply a new strategy to take action right away. Learners' perceptions and problem-solving abilities vary. Finding efficient teaching methods has always been a goal in the field of education. A learning method that is becoming more and more popular is the heuristic approach, which pushes students to solve problems on their own by applying critical thinking and problem-solving skills.

From a broad viewpoint, this study looks at general patterns and their consequences down to the individual cognitive processes that are involved in mathematical reasoning and reading comprehension.

When the research zooms in on the average level, it takes on a more focused emphasis on the relationship between the heuristic approach and arithmetic and reading comprehension skills. This intermediate level of analysis explores how heuristic-based interventions are designed and put into practice



within the current educational frameworks. In the framework of mathematics and reading comprehension skills, it explores the dynamics of heuristic learning and how these abilities interact and support one another. Additionally, the average development examines how teachers support heuristic learning.

The research aims to comprehend the possible opportunities and problems in utilization of heuristic approach into the learners' reading comprehension skills and mathematical abilities. It assesses how well heuristic tactics are incorporated into lesson plans while considering how flexible these methods are in various learning environments. The goal of this level of analysis is to close the knowledge gap that exists between general educational policies and the actual application of heuristic approach in mathematics.

1.1 Statement of the Problem

Specifically, the study sought to address the following specific questions:

1. What is the level of utilization Heuristic Approach in terms of:
 - 1.1 Problem Complexity;
 - 1.2 Task Type;
 - 1.3 Available Information;
 - 1.4 Task Familiarity; and
 - 1.5 Feedback?
2. What is the level of Learners' Reading Comprehension Skills in terms of:
 - 2.1 Literal Comprehension;
 - 2.2 Inferential Comprehension; and
 - 2.3 Critical Comprehension?
3. What is the level of Learners' Mathematical Abilities in terms of:
 - 3.1 Critical Thinking;
 - 3.2 Numeracy Skills; and
 - 3.3 Problem Solving?
4. Is there a significant effect on the utilization of Heuristic Approach on the learners' reading comprehension skills?
5. Is there a significant effect on the utilization of Heuristic Approach on the learners' mathematical abilities?

2. METHODOLOGY

The research design used in this study was a descriptive method which is used to identify the effects of utilization of Heuristic Approach on learners reading comprehension skills and mathematical abilities.

According to Sirisilla (2023), descriptive research design is a powerful tool used by scientist and researchers to gather information about a particular group. This method includes the gathering of data regarding current conditions and ascertaining what is typical or normal under specific conditions. The researcher used questionnaire as the instrument in gathering data.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis, and interpretation of the data gathered used to determine the significant effect in the utilization of the Heuristic Approach on learners' reading comprehension skills and mathematical abilities.

Level of utilization Heuristic Approach

In this study, the level of utilization of the Heuristic Approach refers to Problem Complexity, Task Type, Available Information, Task Familiarity, and Feedback.

The level of utilization of the Heuristic Approach in the following tables reveals the statement, mean, standard deviation, remarks, and verbal interpretation.

The data provided in Table 1 shows how effective heuristic approaches are thought to be when solving issues of different levels of complexity. The mean scores across statements ranged from 3.57 to 4.06, indicating that participants generally agreed on the usefulness of heuristics for solving difficult situations. This implies a general propensity to use heuristic techniques when confronted with complex problem situations.

Furthermore, the comparatively low standard deviations suggest that respondents generally agree that heuristics are useful in a variety of difficult circumstances.

Table 1 shows the level of utilization Heuristic Approach in terms of Problem Complexity.

Table 1. Level of utilization Heuristic Approach in terms of Problem Complexity

STATEMENT	MEAN	SD	REMARKS
I am more likely to use heuristics to solve more complex problems.	4.06	0.86	Agree
I find myself relying on heuristics to make progress when dealing with difficult problems.	3.68	0.69	Agree
I find heuristic more helpful for solving complex problems than for solving simple problems.	4.00	0.97	Agree
I am more likely to use heuristics when I am unsure of how to solve a problem.	3.73	0.97	Agree
In attempting complex problems, heuristics help me break them down into manageable pieces.	3.57	0.98	Agree
Weighted Mean			<i>3.81</i>
SD			<i>0.91</i>
Verbal Interpretation			<i>High</i>



The data presented in Table 2 depicts the perceived level of effectiveness in utilization heuristic approaches across different types of tasks. Participants generally agreed on the suitability of heuristics for specific problem-solving contexts, as evidenced by mean scores ranging from 3.60 to 4.06 across various statements. This suggests a consensus among

respondents regarding the applicability of heuristic strategies in tasks that demand creativity, innovation, analytical thinking, and logical reasoning.

Table 2 shows the level of utilization Heuristic Approach in terms of Task Type.

Table 2. Level of Utilization of Heuristic Approach in terms of Task Type

STATEMENT	MEAN	SD	REMARKS
Heuristics are better suited in some types of problems than other approach.	3.84	0.94	Agree
Heuristics provide a structured approach in analyzing information and identifying patterns	3.73	0.75	Agree
Heuristics are more effective for solving analytical tasks that require logical reasoning and problem-solving skills	3.94	0.84	Agree
Heuristics are more likely to use when working on task that requires creativity.	4.06	0.94	Agree
Heuristics are more likely to use when working on a task that involves innovation and out-of-the-box thinking	3.60	1.01	Agree
Overall	3.83	0.89	Effective
<i>Weighted Mean</i>			3.83
<i>SD</i>			0.89
<i>Verbal Interpretation</i>			High

Moreover, the relatively low standard deviations indicate a consistent agreement among participants regarding the utility of heuristics across different task types. This consistency suggests that individuals perceive heuristic approaches as valuable tools for navigating diverse problem-solving scenarios, thereby highlighting their versatility and effectiveness in addressing a wide range of tasks. Overall, the

data supports the notion that heuristic approaches are an effective means of problem-solving across various task types, corroborating both theoretical frameworks and empirical evidence in the field of decision sciences.

Table 3 shows the level of utilization of the Heuristic Approach in terms of Available Information.

Table 3. Level of utilization of Heuristic Approach in terms of Available Information

STATEMENT	MEAN	SD	REMARKS
The amount of information available to me affects my use of heuristics.	3.75	0.95	Agree
When I have more information to work with, I am less likely to rely on heuristics.	3.59	0.94	Agree
Heuristics allow me to make informed decisions even when faced with incomplete or contradictory information.	3.90	0.98	Agree
With limited information, heuristics allow me to make informed decisions based on available clues and intuition.	3.97	0.86	Agree
Even when I don't remember the exact formula, using a heuristic approach based on the available information helps me make progress on solving a math problem.	4.05	0.92	Agree
Overall	3.85	0.93	Effective
<i>Weighted Mean</i>			3.85
<i>SD</i>			0.94
<i>Verbal Interpretation</i>			High

This illustrates the perceived efficacy of utilization heuristic approaches in problem-solving tasks, contingent upon the amount and nature of available information. Participants generally agreed on the influence of available information on their propensity to employ heuristics, as indicated by mean scores ranging from 3.59 to 4.05 across different statements. This suggests a consensus among respondents regarding the adaptability of heuristic strategies in response to varying levels of informational availability.

This illustrates the perceived effectiveness of employing heuristic approaches in problem-solving tasks, contingent upon the familiarity with the task at hand. Participants generally agreed on the influence of task familiarity on their propensity to utilize heuristics, as indicated by mean scores ranging from 3.81 to 4.13 across different statements. This suggests a consensus among respondents regarding the adaptability of heuristic strategies in response to the familiarity level of the task.



Table 4 shows the level of utilization of the Heuristic Approach in terms of Task Familiarity.

Table 4. Level of utilization Heuristic Approach in terms of Task Familiarity

Statement	Mean	SD	Remarks
My familiarity with a task affects my use of heuristics.	3.81	0.86	Agree
For tasks that involve pattern recognition decision-making, heuristics can be particularly helpful.	4.13	0.83	Agree
In situations where time is important, heuristics can offer a shortcut for solving familiar tasks without losing effectiveness.	3.97	0.82	Agree
I find heuristics to be particularly useful in getting started and making progress.	3.97	0.95	Agree
I rely on heuristics more when I am learning a new task.	3.81	1.08	Agree
Weighted Mean			3.94
SD			0.91
Verbal Interpretation			High

Moreover, the relatively low standard deviations imply a consistent agreement among participants regarding the impact of task familiarity on heuristic utilization. This consistency suggests that individuals perceive heuristic approaches as valuable tools for initiating and making progress in problem-

solving tasks, particularly in scenarios where time is of the essence or when faced with tasks requiring pattern recognition.

Table 5 shows the level of utilization of the Heuristic Approach in terms of Feedback.

Table 5. Level of utilization Heuristic Approach in terms of Feedback

STATEMENT	MEAN	SD	REMARKS
I feel confident using this approach to solve problems on my own.	3.97	0.82	Agree
Compared to other methods, this approach will make solving math problems easier.	3.73	0.90	Agree
I believe I can use this approach to solve new and more challenging math problems.	3.90	0.89	Agree
I would recommend this approach to other students who are struggling with math.	3.97	1.02	Agree
I found this approach to be helpful way to learn math.	3.68	1.00	Agree
Weighted Mean			3.85
SD			0.93
Verbal Interpretation			High

The data in Table 5 elucidates the perceived effectiveness of employing heuristic approaches in problem-solving tasks, particularly concerning the presence and nature of feedback. Participants generally agreed on the impact of feedback on their confidence and efficacy in utilization heuristic strategies, as indicated by mean scores ranging from 3.68 to 3.97 across different statements. This suggests a consensus among respondents regarding the importance of feedback in reinforcing the utility of heuristic approaches in problem-solving.

Moreover, the relatively low standard deviations imply a consistent agreement among participants regarding the impact of feedback on their perception of the effectiveness of heuristic approaches. This consistency suggests that individuals perceive feedback as a crucial factor in shaping their attitudes and beliefs towards heuristic problem-solving methods.

Level of Learners' Reading Comprehension Skills

In this study, the level of Learners' Reading Comprehension Skills refers to Literal Comprehension, Inferential comprehension, and Critical Comprehension.

The following table reveals the score, frequency, percentage, mean, standard deviation, and Interpretation.

The data in Table 6 indicates a proficient level of reading comprehension skills among learners, particularly in terms of literal comprehension. With the mean score of 3.70 and most learners achieving scores in the "Very Satisfactory" to "Outstanding" range, it suggests a strong ability to understand explicit information from texts.

Table 6 shows the level of Learners' Reading Comprehension Skills in terms of Literal Comprehension.



Table 6. Level of Learners' Reading comprehension Skills in terms of Literal Comprehension

SCORE	FREQUENCY (f)	PERCENTAGE (%)	REMARKS
5	17	27%	Outstanding
4	24	38%	Very Satisfactory
3	12	19%	Satisfactory
2	6	10%	Fairly Satisfactory
1	4	6%	Did Not Meet Expectation
N - 63		100%	
<i>Mean</i>			3.70
<i>SD</i>			1.15
<i>Verbal Interpretation</i>			Proficient

Overall, the data underscores the importance of fostering reading comprehension skills in educational settings to ensure students' ability to effectively engage with and extract meaning from various texts, contributing to their overall academic development and success.

The data presented in Table 7 indicates learners' reading comprehension skills, specifically focusing on inferential comprehension. Most learners fall within the "Satisfactory" and "Very Satisfactory" categories, with 44% achieving a score of

5-6 (Satisfactory) and 27% scoring 7-8 (Very Satisfactory). However, no learners attained the highest score range (9-10), while only a small percentage (3%) fell into the "Did Not Meet Expectation" category, indicating a generally positive outcome. The mean score of 5.43 suggests that learners are approaching proficiency in inferential comprehension, though not yet at the level of "Outstanding" performance.

Table 7 shows the level of Learners' Reading comprehension Skills in terms of Inferential Comprehension.

Table 7. Level of Learners' Reading Comprehension Skills in terms of Inferential Comprehension

SCORE	FREQUENCY (f)	PERCENTAGE (%)	REMARKS
9-10	0	0%	Outstanding
7-8	17	27%	Very Satisfactory
5-6	28	44%	Satisfactory
3-4	16	25%	Fairly Satisfactory
0-2	2	3%	Did Not Meet Expectation
N - 63		100%	
<i>Mean</i>			5.43
<i>SD</i>			1.49
<i>Verbal Interpretation</i>			Approaching Proficient

Overall, the data underscores the significance of fostering inferential comprehension skills in educational contexts to enhance students' ability to analyze and interpret textual information effectively, contributing to their overall literacy

development and academic success.

Table 8 shows the level of Learners' Reading comprehension Skills in terms of Critical Comprehension.

Table 8. Level of Learners' Reading comprehension Skills in terms of Critical Comprehension

SCORE	FREQUENCY (f)	PERCENTAGE (%)	REMARKS
5	30	48%	Outstanding
4	14	22%	Very Satisfactory
3	11	17%	Satisfactory
2	8	13%	Fairly Satisfactory
1	0	0%	Did Not Meet Expectation
N - 63		100%	
<i>Mean</i>			4.13
<i>SD</i>			1.18
<i>Verbal Interpretation</i>			Proficient

Table 8 provides an overview of learners' reading comprehension skills, specifically focusing on critical comprehension. The data indicates a high level of performance

among learners, with the majority achieving scores categorized as "Outstanding" (48%) and "Very Satisfactory" (22%). Additionally, 17% of learners attained a "Satisfactory" score,



while 13% fell into the "Fairly Satisfactory" category. Notably, no learners scored in the "Did Not Meet Expectation" category. The mean score of 4.13 suggests a proficient level of critical comprehension skills among the learner population.

Overall, the data underscores the effectiveness of educational interventions aimed at fostering critical comprehension skills, which are essential for developing students' capacity for independent thought and informed decision-making.

Level of Learners' Mathematical Abilities

In this study, the level of Mathematical Abilities refers to numeracy skills, critical thinking and problem-solving skills.

The level of Mathematical Abilities in the following table reveals the score, frequency, percentage, mean, standard

deviation and verbal interpretation.

Table 9 provides an overview of learners' mathematical abilities, specifically focusing on numeracy skills. The data indicates a varied distribution of scores, with the majority of learners falling within the "Very Satisfactory" (51%) and "Satisfactory" (33%) categories.

Additionally, 11% of learners achieved a "Fairly Satisfactory" score, while 5% attained an "Outstanding" score. Notably, no learners scored in the "Did Not Meet Expectation" category. The mean score of 9.48 suggests that learners are approaching proficiency in numeracy skills.

Table 9 shows the level of Learners' Mathematical Abilities in terms of Numeracy Skills

Table 9. Level of Learners' Mathematical Abilities in terms of Numeracy Skills

SCORE	FREQUENCY (f)	PERCENTAGE (%)	REMARKS
13-15	3	5%	Outstanding
10-12	32	51%	Very Satisfactory
7-9	21	33%	Satisfactory
4-6	7	11%	Fairly Satisfactory
1-3	0	0%	Did Not Meet Expectation
N - 63		100%	
<i>Mean</i>			9.48
<i>SD</i>			1.96

Verbal Interpretation

Table 10 outlines the level of learners' mathematical abilities, focusing specifically on critical thinking skills. The data illustrates a positive distribution of scores, with the majority of learners achieving scores categorized as "Very Satisfactory" (56%) and "Satisfactory" (30%). Additionally, 13% of learners attained an "Outstanding" score. Notably, no learners fell into the "Fairly Satisfactory" or "Did Not Meet Expectation"

categories. The mean score of 10.30 suggests that learners are proficient in critical thinking skills within the context of mathematics.

Table 10 shows the Level of Learners' mathematical abilities in terms of Critical Thinking.

Table 10. Level of Learners' Mathematical Abilities in terms of Critical Thinking

SCORE	FREQUENCY	PERCENTAGE	DESCRIPTIVE VALUE
13-15	8	13%	Outstanding
10-12	35	56%	Very Satisfactory
7-9	19	30%	Satisfactory
4-6	1	2%	Fairly Satisfactory
1-3	0	0%	Did Not Meet Expectation
N - 63		100%	
<i>Mean</i>			10.30
<i>SD</i>			1.87

Verbal Interpretation

Overall, the data underscores the effectiveness of educational approaches aimed at fostering critical thinking skills in the domain of mathematics, contributing to learners' overall mathematical proficiency and academic success.

(44%) and "Satisfactory" (43%). Additionally, 6% of learners attained an "Outstanding" score, while 6% achieved a "Fairly Satisfactory" score. Notably, no learners fell into the "Did Not Meet Expectation" category. The mean score of 9.30 suggests that learners are approaching proficiency in problem-solving skills.

Table 11 shows the level of Learners' Mathematical Abilities in terms of Problem Solving.

Table 11 presents an analysis of learners' mathematical abilities, specifically focusing on problem-solving skills. The data indicates a varied distribution of scores, with the majority of learners achieving scores categorized as "Very Satisfactory"



Table 11. Level of Learners' Mathematical Abilities in terms of Problem Solving

SCORE	FREQUENCY (f)	PERCENTAGE (%)	REMARKS
13-15	4	6%	Outstanding
10-12	28	44%	Very Satisfactory
7-9	27	43%	Satisfactory
4-6	4	6%	Fairly Satisfactory
1-3	0	0%	Did Not Meet Expectation
N - 63		100%	
<i>Mean</i>			9.30
<i>SD</i>			1.92
<i>Verbal Interpretation</i>			Approaching Proficient

This interpretation aligns with research emphasizing the significance of problem-solving abilities in mathematics education (Avvisati & Borgonovi 2020). The distribution of scores reflects a positive outcome, indicating that learners have demonstrated competency in applying mathematical concepts to solve a variety of problems.

Overall, the data highlights the effectiveness of educational strategies aimed at fostering problem-solving skills, which are essential for learners' success in both academic and real-world contexts.

Utilization of Heuristic Approach on the Learners' Reading Comprehension Skills

In this study, the significant effect of utilization of heuristic approach in learners' reading comprehension skills was determined.

The following table shows the heuristic approach, learners' reading comprehension skills, t-value, and p-value.

The analysis reveals varying levels of significance in the effect of utilization heuristic approaches on learners' reading comprehension skills across different dimensions. For problem complexity, task type, available information, and feedback, no statistically significant effects were observed on literal, inferential, and critical comprehension skills (all $p > 0.05$).

However, when considering task familiarity, there was a significant effect observed on inferential comprehension skills ($p = 0.017$). Specifically, as learners became more familiar with tasks, their inferential comprehension skills showed improvement.

Table 12 shows the significant effect of utilization of Heuristic Approach on the Learners' Reading Comprehension Skills.

Table 12. Utilization of Heuristic Approach on the Learners' Reading Comprehension skills

Heuristic Approach	Reading Comprehension Skills					
	Literal Comprehension		Inferential Comprehension		Critical Comprehension	
	t-value	p-value	t-value	p-value	t-value	p-value
Problem Complexity	0.87	0.390	0.91	0.367	1.19	0.239
Task Type	0.65	0.516	1.60	0.114	0.50	0.629
Available Information	0.86	0.392	1.71	0.092	0.67	0.504
Task Familiarity	1.38	0.172	2.45	0.017*	0.88	0.384
Feedback	1.10	0.274	1.66	0.101	0.01	0.990

Note: * $p < .05$.

This finding suggests that familiarity with tasks may enhance learners' ability to make inferences and draw conclusions from textual material. Interestingly, while there was no statistically significant effect observed for critical comprehension skills in relation to task familiarity, the effect was marginally significant for inferential comprehension skills.

Overall, these results highlight the nuanced relationship between heuristic approaches and reading comprehension skills, suggesting that certain factors, such as task familiarity, may have a more pronounced impact on specific aspects of comprehension.

Utilization of Heuristic Approach on the Learners' Mathematical Abilities

In this study, the significant effect of utilization of heuristic approach in learners' mathematical abilities was determined.

The following table shows the heuristic approach, mathematical abilities, t-value, and p-value.

The analysis suggests no significant effect of utilization heuristic approaches on learners' mathematical abilities across various dimensions. For problem complexity, task type, available information, task familiarity, and feedback, no statistically significant effects were observed on numeracy skills, critical thinking, or problem-solving abilities (all $p > 0.05$).

These findings indicate that the utilization of heuristic approaches does not have a discernible impact on learners' mathematical abilities in the contexts examined.

Table 13 shows the utilization of Heuristic Approach on the Learners' Mathematical Abilities



Table 13. Utilization of Heuristic Approach on the Learners' Mathematical Abilities

Heuristic Approach	Learners' Mathematical Abilities					
	Numeracy Skills		Critical Thinking		Problem-solving	
	t-value	p-value	t-value	p-value	t-value	p-value
Problem Complexity	0.41	0.686	0.22	0.830	0.35	0.726
Task Type	1.51	0.123	0.02	0.982	0.36	0.718
Available Information	1.28	0.207	0.45	0.658	0.14	0.891
Task Familiarity	1.11	0.272	0.15	0.885	0.82	0.413
Feedback	0.62	0.535	0.75	0.456	0.01	0.992

Note: * $p < .05$.

However, it is important to note that statistical significance does not necessarily imply practical significance, and further research may be needed to explore potential interactions or nuanced effects that were not captured in this analysis.

4. CONCLUSION AND RECOMMENDATIONS

The study aimed to test two hypotheses regarding the effect of utilization heuristic approaches on the learners' reading comprehension skills and mathematical abilities.

It was observed that there is no effect between utilization of heuristic approach to the learners' reading comprehension skills. Through comprehensive research design and statistical analysis, the findings revealed implication relationships between heuristic approaches and academic outcomes. While heuristic approaches were perceived as effective in fostering certain aspects of reading comprehension skills, particularly in terms of inferential and critical comprehension, the statistical analysis did not yield significant results across all dimensions.

Similarly, there is no effect between utilization of heuristic approach and the mathematical abilities of learners. The findings emphasize the utilization of heuristic approaches did not lead to a discernible impact on learners' mathematical abilities. Thus, based on the findings of this study, it is evident that further research is necessary to explore the complexities of the relationship between heuristic approaches and academic outcomes, informing instructional practices and curriculum development in both literacy and mathematics education.

Based on the important findings of the study, the following recommendations are proposed:

1. Teachers may get training from programs on how to use heuristic techniques in their education, including how to structure lessons, encourage student participation, and give constructive criticism. Programs for specialized professional development may help educators apply heuristic-based teaching practices in an efficient manner. Educational institutions may guarantee that heuristic-based teaching approaches are successfully implemented in the classroom by providing educators with the required training and resources.
2. Educational institutions may think about incorporating heuristic methodology into their curriculum design. The creation of specific modules or units centered on heuristic problem-solving techniques in the teaching of mathematics and reading might be examples of concrete programming. These modules may be designed with certain learning goals and standards in mind, giving

students organized chances to use heuristic strategies in a variety of scenarios for addressing problems.

3. Educational institutions may cultivate a feedback culture in their learning settings because of the significance of feedback in bolstering the usefulness of heuristic techniques in problem-solving. Empirical initiatives could encompass the deployment of peer review protocols, self-evaluation instruments, and cooperative education activities that stimulate students to offer and get input on their problem-solving endeavors. Educational institutions may help students improve their heuristic problem-solving abilities and overall academic performance by providing chances for continuous feedback and reflection.

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METACOGNITIVE STRATEGIES EMPLOYED BY AUTONOMOUS LEARNERS AND THEIR ACADEMIC PERFORMANCE

Cindy Sto.Tomas Hernal

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study explores the domain of metacognitive strategies applied by autonomous learners to their academic performance and to address the research problem stated. It comprised the following; level of metacognitive strategies employed by the learners in terms of planning, monitoring, evaluating and reflecting, performance of the learners in english in terms of written works, performances tasks, quarterly exams and the significant relationship between Metacognitive Strategies employed by autonomous learners to their academic performance

On the other hand, descriptive method of research was utilized in this study. A questionnaire was formulated and given to one hundred twenty-eight (128) respondents, who were selected purposefully as Grade 9 students who had an average final grade of 90 percent in English for the first two quarters of the present school year at Pag-asa National High School. The 34-question self-made survey questionnaire focused on the various metacognitive strategies employed by the learner in terms of planning, monitoring, evaluating, and reflecting strategies.

The findings revealed that the level of learners in using metacognitive strategies in terms of Planning, Monitoring, Evaluating, and Reflecting was remarked as strongly agreed and was very high among the respondents. As to the academic performance of the learners in English in terms of written works, academic performance underscores the exceptional performance of the students collectively. Moreover, the academic performance of the learners in English in terms of quarterly examinations for the first and second quarters was both very satisfactory, indicating an overall improvement in academic achievement.

From the results, some indicators show a significant connection; however, other indicators do not display a significant relationship. The researcher found out that several students, as respondents to the study at Pag-asa National High School, did not use some of the strategies suggested. It could indicate that even in the absence of a specific strategy, students continue to learn and acquire knowledge.

It recommends that the findings of the study be applied to provide students with a better grasp of particular metacognitive strategies when comprehending texts in English. Students can improve their capacity to plan, monitor, assess, and reflect on the results of their learning by incorporating these strategies into their learning processes. This proactive strategy eventually facilitates students' academic performance by cultivating attention and expertise in picking the most effective strategies specific to various learning tasks.

KEYWORDS: metacognitive strategies; autonomous learners; academic performance

1. INTRODUCTION

Learner-centered approaches have become the dominant paradigm in education, resulting in a significant restructuring of the field in recent years. In educational discourse, the rise of autonomous learners who actively take responsibility for their learning processes has gained prominence. Understanding the cognitive processes underlying academic performance is crucial, and this is emphasized in the focus on learners' development. In order to better understand the connection between the metacognitive strategies employed by autonomous learners and their academic achievement, this research works within the established disciplines of metacognition and autonomous learning.

Although previous researches have examined the general connection between metacognition and academic achievement, there is an apparent absence of information in the literature regarding the particular metacognitive techniques used by independent learners when comprehending a text in English. The objective of this thesis is to establish a distinct area of study within this field by specifically focusing on the metacognitive

strategies used by students who actively influence their learning. With an enhanced and pedagogical framework, this study seeks to provide an understanding of how metacognition appears in the context of self-directed learning based on (Kuo et al., 2013).

This research aims to thoroughly examine the metacognitive strategies used by autonomous learners as well as how this influence academic achievement. Through integrating the theoretical foundations of autonomous learning and metacognition, researcher hope to provide useful information that can guide interventions and practices in the classroom. By means of quantitative research and comprehensive study, this research aims to clarify the efficacy of different metacognitive strategies in varied learning settings, thereby expanding the understanding of how students might improve their cognitive processes to enhance academic performance.

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:



1. What is the level of learners in using metacognitive strategies in terms of;
 - 1.1 Planning
 - 1.2 Monitoring
 - 1.3 Evaluating
 - 1.4 Reflecting
2. What is the performance of the learners in English in terms of;
 - 1.1 Written works
 - 1.2 Performance tasks
 - 1.3 Quarterly examinations
3. Is there a significant relationship between metacognitive strategies employed by autonomous learners and their academic performance?

metacognitive strategies affect the performance of the students in terms of their written works, performance tasks and also their quarterly exams. According to Curtis EA, Comiskey C, and Dempsey O (2016) stated that patterns and connections between variables can be found using the research method's results and that future events can be predicted using the information available. Participants were junior high school students in grade 9 of the current academic year. This quantitative study examined the relationships between autonomous learners' academic achievement and the metacognitive strategies they use. To do this, a survey questionnaire was employed.

3. RESULTS AND DISCUSSION

This chapter present, analyses and interprets the data gathered that showed significant relationship between metacognitive strategies employed by autonomous learners and their academic performance.

Level of Metacognitive Strategies

Level of metacognitive strategies employed by the learners comprises planning, monitoring, evaluating, and reflecting and was determined by mean and standard deviation.

2. METHODOLOGY

The purpose of the study is to investigate autonomous learners' use of metacognitive strategies and how those strategies relate to their academic achievement. The correlational method of research design used in this investigation to determine whether a connection exists between variables in the study and to determine the relationship of metacognitive strategies to the performance of the students and on how the application of

Table 1. Level of Metacognitive Strategies employed by the Learners in terms of Planning

Indicators	Mean	SD	Remarks
1. I study in advance.	3.49	0.86	Agree
2. I set exact and detailed objectives before beginning any activity or project.	4.12	0.83	Agree
3. I get ready for the activities that are coming up.	4.31	0.78	Strongly Agree
4. I create a schedule that includes a variety of tasks.	3.67	1.00	Agree
5. I usually divide bigger tasks into smaller ones, for me to easily accomplish the part.	4.40	0.88	Strongly Agree
6. I think ahead of time about the strategies and techniques I can employ to understand the topic, subject, or issue.	4.13	0.89	Agree
7. I make sure to concentrate my efforts on the things that are most important by prioritizing activities according to their importance and deadlines.	4.45	0.77	Strongly Agree
8. I try to figure out how lectures can be made more understandable by following a certain order.	4.43	0.75	Strongly Agree

Overall Mean = 4.13

Standard Deviation = 0.91

Verbal Interpretation = High

Table 1 presents the level of metacognitive strategies employed by learners in terms of planning. Students strongly agree that they make sure to concentrate and give effort on things that are important and prioritize activities based on deadlines (M=4.45). Likewise students agree that they make schedule that includes variety of task (M= 3.67). The overall mean of 4.13 and standard deviation of 0.91 indicate that students show a high level of metacognition. This imply that students can optimize their learning experiences. Metacognition helps them to

become aware of their own learning processes, leading to more effective way of learning and improved academic performance. The result highlighted the use of metacognitive strategies in terms of planning, indicating that students are aware of how to organize and plan their study habits by employing metacognition, and it supports the hypothesis that metacognitive strategies are positively associated with the performance of the students.



Table 2. Level of Metacognitive Strategies employed by Learner in terms of Monitoring

Indicators	Mean	SD	Remarks
When I am puzzled by what I am reading, I return and make an attempt to resolve it.	4.77	0.52	Strongly Agree
I assess my performance and determine whether I am working in an efficient way.	3.99	0.85	Agree
I analyze what I hear, read, and see in perspective of what I already know.	4.48	0.71	Strongly Agree
I consider what information is significant enough to recall.	4.26	0.82	Strongly Agree
I determine the accuracy of the solutions using the knowledge gained.	4.27	0.82	Strongly Agree
I determine whether any on-going information has any connections to other topics.	3.95	0.84	Agree
I always double-check my output for errors.	4.30	0.87	Strongly Agree
I go back and forth through the text looking for connections between the ideas.	4.41	0.82	Strongly Agree
I pay close attention to how a paragraph is structured.	4.03	0.81	Agree
I am conscious of how well the methods I employed worked.	3.86	0.82	Agree

Overall Mean = 4.23
 Standard Deviation = 0.58
 Verbal Interpretation = Very High

Table 2 present the level of metacognitive strategies employed by learners in terms of monitoring. The student agree strongly that when I am puzzled by what I am reading, I return and make an attempt to resolve it." (M=4.77) While students agree "I am conscious of how well the methods I employed worked." (M=3.86) The overall mean of 4.23 and standard deviation of 0.58 The data suggests a strong consensus among students in actively addressing confusion when faced with challenging content, as reflected in the notably high mean score of 4.77, indicating a strong agreement. Conversely, there is comparatively less emphasis placed on evaluating the effectiveness of learning methods, as indicated by the lower

mean score of 3.86, suggesting agreement. The data reveals a strong inclination among students to actively address confusion when encountering challenging content, while there's comparatively less emphasis on evaluating the effectiveness of their learning methods. Students get more conscious of their positive and negative aspects. Because of their increased self-awareness, they are better able to focus their efforts on the areas that require improvement. Also, higher academic achievement is typically attained by students who diligently track their learning. This is a result of their ability to recognize situations in which they do not grasp something and act right away to solve it.

Table 3. Level of Metacognitive Strategies employed by learners in terms of Evaluating

Indicators	Mean	SD	Remarks
I evaluate if my goals have been met.	4.21	0.88	Strongly Agree
I assess the techniques' usefulness and effectiveness in accomplishing the goals.	4.01	0.84	Agree
I view mistakes as chances for improvement and apply what I learn to enhance the way I work.	4.45	0.78	Strongly Agree
I evaluate how I am doing on a regular basis, asking myself what was effective and what needs to be changed for better results in the future.	4.28	0.83	Strongly Agree
I review my writing tasks on a regular basis to see how I am going.	4.13	0.95	Agree
I evaluate the newly learned information's correctness, reliability, and educational use.	4.19	0.89	Agree
I assess how well my strategies work for various activities and identify any areas that might need change or improvement.	3.92	0.88	Agree
I analyze my understanding to see if the conclusions that I made about the text are true or false.	4.48	0.71	Strongly Agree

Overall Mean = 4.21 Standard Deviation = 0.86 Verbal Interpretation = Very High

Table 3 present Level of Metacognitive Strategies employed by learners in terms of Evaluating. The student agree strongly that I view mistakes as chances for improvement and apply what I learn to enhance the way I work." (M=4.45) While students agree I assess how well my strategies work for various activities

and identify any areas that might need change or improvement (M=3.92). The overall mean of 4.21 and standard deviation of 0.86. The data indicates a strong commitment among students



to view mistakes as opportunities for growth, as evidenced by the notably high mean score of 4.45, indicating strong agreement. Conversely, there is comparatively less emphasis on assessing the usefulness and effectiveness of techniques in goal accomplishment, as indicated by the lower mean score of 3.92 suggesting agreement.

The data reflects a notable tendency among students to embrace mistakes as opportunities for improvement, while there's comparatively less focus on evaluating the effectiveness of

techniques in achieving goals. Based on the results, students may change their learning method to achieve improved results through regular assessments. Acknowledging their most productive study techniques and adjusting the ones that fail to lead to better study habits and, ultimately, better performance and grades. Self-assessment empowers students to take on more accountability for their learning. They take the initiative to look for resources, ask for assistance, and make the required changes on their own, without depending on others.

Table 4. Level Metacognitive Strategies employed by Learners in terms of Reflecting

Indicators	Mean	SD	Remarks
I think about my decisions, how I think, and how I approach things intellectually all the time.	4.27	0.87	Strongly Agree
I recall how I achieved my goals by looking at what I did.	4.34	0.80	Strongly Agree
I analyze how I make decisions, thinking back on the factors that affect my decisions and considering the choices for next steps.	4.20	0.83	Agree
I review my own work by taking into consideration the methods and skills I used to complete a certain task.	4.12	0.85	Agree
I review my past experiences, both inside and outside of the classroom, based on what I have previously learned.	4.34	0.83	Strongly Agree
Every now and then, I review how well I divide up my time between various duties and consider where I may make improvements..	4.19	0.80	Agree
To help me understand other related tasks, I review what I have done before.	4.28	0.78	Strongly Agree
When I reflect on how I prepared for the activities, I consider whether my chosen strategies, skills, and knowledge were appropriate for the tasks at hand.	4.24	0.82	Strongly Agree

Overall Mean = 4.25

Standard Deviation = 0.82

Verbal Interpretation = Very High

Table 4 present level Metacognitive Strategies employed by Learners in terms of reflecting the student agree strongly that I recall how I achieved my goals by looking at what I did (M=4.34) While students agree I review my own work by taking into consideration the methods and skills I used to complete a certain task (M=4.12) The overall mean of 4.25, with a standard deviation of 0.82, signifies a consistent commitment to reflective practices among students. The data illustrates students' strong inclination towards recalling their goal achievement process and reviewing their work, indicating a consistent commitment to reflective practices. The data reveals a strong tendency among students to actively reflect on their goal achievement process, as indicated by the notably high mean score of 4.34, suggesting strong agreement. Conversely, there is a slightly lower emphasis on reviewing their own work by considering the methods and skills utilized, as indicated by the lower mean score of 4.12, suggesting agreement.

The data shows students consistently exhibit a strong inclination towards reflecting on their decision-making processes and past experiences, emphasizing a proactive approach to self-assessment and improvement. Students can see improvements in their performance and understanding by reflecting back on their learning experiences. They are able to create more efficient learning strategies since they can observe what works and what does not apply for them. In addition to that, Students gain the ability to control their own learning. They get better at establishing objectives, keeping track of their progress, and modifying their strategy of action as needed.

Performance of the learners

Learners' performance categorizes written works, performance task and quarterly examination and was determine by mean and standard deviation.



Table 5. Performance of the learners in English in terms of Written Works

Written Works	First Quarter		Second Quarter		Remarks
	Frequency	Percentage	Frequency	Percentage	
90-100	29	22.66%	110	85.94%	Outstanding
85-89	39	30.47%	7	5.47%	Very Satisfactory
80-84	43	33.59%	0	0.00%	Satisfactory
75-79	15	11.72%	4	3.13%	Fairly Satisfactory
Below 75	2	1.56%	7	5.47%	Needs Improvement
<i>Mean</i>	85.52		94.14		
<i>SD</i>	5.26		6.51		
<i>Verbal Interpretation</i>	<i>Very Satisfactory</i>		<i>Outstanding</i>		

Table 5 show the performance of the students in terms of written works in the first quarter and second quarter. In the first quarter, twenty-nine students, comprising 22.66% of the total, achieved grades between 90-100. Thirty-nine students, accounting for 30.74% of the total, attained grades ranging from 85-89. The majority of students, totalling 33.59%, received grades between 80-84. Additionally, fifteen students, representing 11.725% of the total, scored within the range of 75-79.

Finally, two students, constituting 1.56% of the total, obtained a grade of below 75. The overall mean for the first quarter grade of the students in the written performance is 8.52 standard deviation of 5.26 indicating a very satisfactory performance among the students. In the second quarter, it's evident that the majority of students, comprising 85-94% of the total, achieved grades ranging from 90-100. However, a small number of students, seven in total or 5.47%, received grades below 75. Furthermore, the overall mean grade of 94.14, with a standard deviation of 6.51, underscores the exceptional performance of the students collectively.

The results indicate that the students' performance, both individually and collectively, is notably strong and commendable for the second quarter. Students that use metacognitive skills are better able to plan and organize their work. They are able to organize their thoughts logically, create an introduction, a body, and a conclusion for their writing, and outline their ideas. Students' trust in their writing skills increases when they regularly apply metacognitive strategies. Their self-awareness about their areas of strength and growth makes them feel more equipped and driven to complete writing projects.

However, various students require different kinds of encouragement due to differences in their metacognitive ability levels. It takes time, constant practice, and instructor support for implementation to be successful. By incorporating these techniques into the process of writing and offering continuous support, teachers can assist students in becoming more proficient and independent writers.

Table 6. Performance of the learners in English in terms of Performance Tasks

Performance Tasks	First Quarter		Second Quarter		Remarks
	Frequency	Percentage	Frequency	Percentage	
90-100	108	84.38%	80	62.50%	Outstanding
85-89	20	15.63%	45	35.16%	Very Satisfactory
80-84	0	0.00%	3	2.34%	Satisfactory
75-79	0	0.00%	0	0.00%	Fairly Satisfactory
Below 75	0	0.00%	0	0.00%	Needs Improvement
<i>Mean</i>	93.19		90.79		
<i>SD</i>	2.76		3.21		
<i>Verbal Interpretation</i>	<i>Outstanding</i>		<i>Outstanding</i>		

The table provides a detailed breakdown of student performance across various grade ranges for the first and second quarters, offering insights into their academic achievements. Notably, in the first quarter, an overwhelming 84.38% of students achieved grades within the "Outstanding" range (90-100%), showcasing an exceptional level of performance.

However, in the subsequent quarter, while still impressive, the percentage of students in this range decreased to 62.50%. This slight decline notwithstanding, the overall performance remained consistently "Outstanding," reflecting the strong academic calibre of the students. Additionally, there was a notable increase in the percentage of



students falling within the "Very Satisfactory" range (85-89%) from 15.63% in the first quarter to 35.16% in the second quarter, indicating significant improvement. Conversely, there were no students falling within the "Satisfactory" range (80-84%) in the first quarter, but a small proportion (2.34%) did so in the second quarter, signalling a positive trend. Overall, the data underscores the high level of academic achievement among students, with the majority consistently performing at outstanding levels, albeit with slight fluctuations observed between quarters. The table depicts a notable distribution of student performance across different grade ranges, with the majority achieving at an outstanding level in both quarters, although there were slight fluctuations in percentages between the two periods.

Moreover, students that employ metacognitive strategies are able to organize, monitor, and assess how they approach learning and solving problems, which can greatly improve their

performance on a variety of tasks. These strategies are very helpful for performance tasks, which frequently require applying knowledge and abilities in real-world or real-life situations. Students who employ metacognitive strategies demonstrate enhanced abilities to apply their knowledge and comprehension across a range of tasks and situations, including but not limited to writing, mathematics, reading comprehension, memorization, critical thinking, and problem-solving.

Additionally, it pertains to how pupils manage their academics and how they adapt too many performance-affecting circumstances. Academic achievement plays a vital role in the overall development of young individuals. Those who excel in their studies are more likely to successfully navigate life challenges and attain financial and career prosperity.

Table 7. Performance of the learners in English in terms of Quarterly Examinations

Quarterly Exam	First Quarter		Second Quarter		Remarks
	Frequency	Percentage	Frequency	Percentage	
90-100	25	19.53%	40	31.25%	Outstanding
85-89	9	7.03%	29	22.66%	Very Satisfactory
80-84	11	8.59%	12	9.38%	Satisfactory
75-79	17	13.28%	15	11.72%	Fairly Satisfactory
Below 75	66	51.56%	32	25.00%	Needs Improvement
Mean	74.89		83.08		
SD	13.05		10.51		
<i>Verbal Interpretation</i>		<i>Needs Improvement</i>		<i>Satisfactory</i>	

The table presents the distribution of student performance on quarterly exams for both the first and second quarters. It provides insights into the frequency and percentage of students within different grade ranges, along with the corresponding remarks and statistical measures. In the first quarter 19.53% of students scored in the "Outstanding" range (90-100), indicating exceptional performance 7.03% achieved grades in the "Very Satisfactory" range (85-89), reflecting a high level of proficiency. 8.59% fell into the "Satisfactory" range (80-84), demonstrating competency in the subject matter 13.28% received grades in the "Fairly Satisfactory" range (75-79), indicating a fair level of understanding. The majority of students, constituting 51.56%, scored below satisfactory levels, categorized as "Needs Improvement." In the second quarter. There was an improvement in student performance, with 31.25% achieving "Outstanding" grades. The percentage of students in the "Very Satisfactory" range increased to 22.66%. There were slight decreases in the percentages of students in the "Satisfactory" and "Fairly Satisfactory" ranges. The percentage of students needing improvement decreased to 25.00%. The mean scores for the first and second quarters were 74.89 and 83.08, respectively, indicating an overall improvement in academic achievement. Additionally, the standard deviation decreased from 13.05 to 10.51, suggesting reduced variability

in student scores.

Students who use metacognitive strategies—which entail being aware of and in charge of their own learning processes—perform significantly better on exams. Students are motivated by metacognitive strategies to study thoroughly instead of passively. Instead of repetitive memorizing, they concentrate on conceptual comprehension, which improves retention and recall during tests. Accurate assessment of comprehension by students increases the likelihood that they will focus on their areas of difficulty. Exam results are improved overall when this focused strategy is used. They gain the capacity to modify their learning techniques in accordance with what fits those best, which results in more efficient studying and improved exam performance.

On the other hand, for students with busy schedules, incorporating metacognitive methods into normal study routines might be difficult because it takes time and dedication. It can be challenging to apply metacognitive techniques consistently. For students to remain motivated, they might require constant encouragement as well as reminders. It is necessary to modify metacognitive strategies to adjust for different learning preferences and styles. What is effective for



one student might not be for another.

Overall, the data reflects changes in student performance over time, with improvements observed in the second quarter across various grade ranges, indicating progress in academic

proficiency. The table depicts an overall improvement in student performance on quarterly exams, with notable increases in the percentages of students achieving higher grades a significant decrease in the proportion of students needing improvement between the first and second quarters.

Table 8. Significant relationship between Metacognitive Strategies employed by autonomous learners and their academic performance

Metacognitive Strategies		Students Performance					
		First Quarter			Second Quarter		
		Written Works	Performance Tasks	Quarterly Examination	Written Works	Performance Tasks	Quarterly Examination
Planning	Pearson Correlation	0.088	-.187*	0.107	0.029	0.097	.178*
	Sig. (2-tailed)	0.325	0.035	0.230	0.743	0.280	0.045
	N	127	127	127	127	127	127
Monitoring	Pearson Correlation	.223*	-0.052	-0.052	0.046	0.15	.175*
	Sig. (2-tailed)	0.012	0.563	0.559	0.608	0.092	0.049
	N	127	127	127	127	127	127
Evaluating	Pearson Correlation	.191*	-0.095	0.014	0.055	0.163	0.166
	Sig. (2-tailed)	0.031	0.286	0.878	0.540	0.067	0.062
	N	127	127	127	127	127	127
Reflecting	Pearson Correlation	.191*	-0.146	0.044	0.01	0.085	.187*
	Sig. (2-tailed)	0.031	0.102	0.624	0.914	0.342	0.035
	N	127	127	127	127	127	127

Table 8 show significant relationship between metacognitive strategies in terms of planning, monitoring, evaluating and reflecting employed by autonomous learners and their performance in terms of written work, performance task, and quarterly examination. The correlation between planning and performance is notable in both performance tasks and quarterly examinations. Similarly, monitoring shows a significant association with written assignments and quarterly examinations. Additionally, evaluating demonstrates a significant relationship with written assignments, while reflecting also indicates a significant connection with quarterly exams ($p < 0.05$).

However, other indicators do not display a significant relationship. This emphasize that focusing on planning, monitoring, evaluating, and reflecting could be particularly beneficial for enhancing academic performance among

autonomous learners. Therefore, educators and learners alike may benefit from emphasizing and incorporating these metacognitive strategies into their learning processes.

The results showed that students' writing quality and capacity for self-regulation during the writing process significantly improved as a result of specific training in the planning, monitoring, and evaluation of writing assignments. Students' writing skills significantly increase when metacognitive strategies are included in writing instruction. Students can develop into more skilled and self-assured writers by being encouraged to be aware of and in charge of their writing processes.

To improve students' writing performance, teachers should think about including metacognitive skills instruction into their writing curriculum.



4. CONCLUSION AND RECOMMENDATIONS

The study shows the relationship between metacognitive strategies employed by autonomous learners and their academic performance has not significant. According to the findings, the respondents firmly agreed that learners used a high level of metacognitive processes when it came to planning, monitoring, evaluating, and reflecting. Academic performance highlights the outstanding performance of the pupils as a whole when it comes to the English language learners' written works. Additionally, the learners' academic performance in English was highly satisfactory in both the first and second quarters' quarterly assessments, suggesting an overall improvement in their academic achievement. However, certain indicators indicate a noteworthy correlation, while other indicators do not demonstrate a meaningful association.

The researcher concludes that the research hypothesis stating that there is no significant relationship between metacognitive strategies employed by autonomous learner and their academic performance is accepted.

Based on the drawn conclusions resulted to the following recommendations:

1. For the students, it is recommended that the findings of the study be employed to allow them to have a deeper understanding of specific metacognitive strategies for comprehending English texts. By integrating these strategies into their learning processes, students can enhance their ability to plan, monitor, evaluate, and reflect on their learning outcomes. This proactive approach fosters mindfulness and proficiency in selecting appropriate strategies tailored to different learning assignments, ultimately facilitating their academic success.

2. It suggested that teachers delve deeper into understanding the various strategies employed by learners to enhance their academic performance. By gaining insights into these strategies, teachers can develop more comprehensive assessments to gauge students' progress accurately. Additionally, they can design meaningful activities that cater to the diverse needs of all learners, including those who may be struggling academically. This approach ensures that all students receive the support and resources they need to succeed, fostering an inclusive learning environment.

3. For future researchers, it is further suggested to explore the effectiveness of specific metacognitive strategies in enhancing learners' comprehension of English texts. Examining the significant effects of different strategies, such as planning, monitoring, evaluating, and reflecting, can provide important information about how effective strategies have been in a variety of educational settings, as well as for the students in particular. Additionally, exploring the implementation of these strategies in diverse educational settings and cultures could enrich our understanding of their universality and adaptability. Such research endeavours would contribute to the development of evidence-based practices and interventions aimed at optimizing learning outcomes for students.

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VISUAL AND AUDITORY DIGITAL INSTRUCTIONS: A SUPPLEMENTARY MATERIAL IN FACILITATING STUDENTS' PROBLEM-SOLVING SKILLS

Francis Canomon Mabunga

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The main purpose of the study was to determine the effect of utilization of visual and auditory digital instructions in facilitating Students' problem-solving skills. This study examines the level of visual and auditory digital instructions in facilitating students' problem-solving skills in terms of content and elements; the level of students' problem-solving skills; and the effect of content and elements of visual and auditory digital instructions to students' problem-solving skills.

The study employed descriptive research to assess the influence of visual and auditory digital instructions on problem-solving skills. Purposive sampling technique was used to 78 Grade 9 students at Lowland Integrated National High School. Descriptive and inferential statistics, including weighted mean formula, standard deviation to measure both the validity of the instructional methods and the level of students' problem-solving skills, and T-test, were utilized to analyze the gathered data and determine the effect of the instructions on students' problem-solving skills.

The level of visual and auditory digital instructions in terms of content and elements ranged from high to very high among the respondents. In addition, the students demonstrate satisfactory to outstanding problem-solving skills with a multi-structural level of logical reasoning, critical thinking, and analytical skills. And it indicates that the content and element of visual and auditory digital instructions shows a significant effect on students' problem-solving skills. It is implied that the visual and auditory digital instructions have significant effect on the learners' problem-solving skills.

The students showed multi-structural level of problem-solving skills. Also, they exhibited relational level of logical reasoning, relational level of critical thinking and relational level of analytical skill. The findings indicate that the content of visual and auditory digital instructions influenced students' problem-solving skills. Similarly, it indicates that the element of visual and auditory digital instructions influenced students' problem-solving skills. Therefore, facilitating students through visual and auditory digital instructions improves students' problem-solving skills.

With the confirmation of a significant effect of visual and auditory digital instructions on students' problem-solving skills, it is imperative for students, teachers, and future researchers to harness the potential of visual and auditory digital instructions to optimize problem-solving outcomes. As such, educators should adopt a multimodal approach to instruction; learners may engage not only with interactive multimedia components, audiovisual presentations, and simulations but also with visual and auditory digital instructions; and encouraging collaborative research endeavors and partnerships between academia, industry, and technology providers can drive innovation in digital instructional design.

KEYWORDS: utilization; digital instructions; problem-solving skills

1. INTRODUCTION

In today's ever-changing educational world, the search to improve learning outcomes and foster fundamental cognitive skills is a constant undertaking. Among these abilities, problem-solving is a cornerstone of intellectual development, crossing disciplinary borders and finding application in a wide range of academic disciplines. In addition to strengthening cognitive abilities, being able to evaluate, synthesize, and come up with answers to complicated problems gives people a diverse toolkit for handling real-world situations. An area of considerable interest in this endeavor is the use of instructional strategies that maximize the potential of multi-modal learning approaches.

The combination of visual and auditory digital instructions and problem-solving ability allows investigation into multiple dimensions. To determine the genuine effect of this pedagogical technique, the effects on cognitive load,

information retention, and the integration of gained knowledge into actionable solutions must be examined. A thorough assessment of how individual variations, such as learning preferences and past knowledge, interact with visual and auditory digital instructions provides useful insights into adapting instructional tactics for varied student cohorts.

This thesis investigates a powerful educational tool— visual and auditory digital instructions —and its potential to independently boost students' problem-solving skills. This medium has promised as an effective assist in the cognitive processes behind problem-solving by combining aural and visual stimuli. It provides a multidimensional learning experience that resonates with multiple learning styles, addressing both aural and visual learners while concurrently easing the cognitive burden associated with complicated problem-solving activities, through the synchronous display of information.



This thesis digs into a detailed review of relevant literature in the following chapters, navigating the worlds of Cognitive Load Theory (CLT), multimedia learning, and pedagogical practices geared at improving problem-solving skills. Using both quantitative and qualitative techniques, empirical investigations are done to explicate the complicated dynamics between visual and auditory digital instructions and the development of problem-solving skills.

The findings of this study have the potential to not only improve educational methods, but also to add significantly to the theoretical discourse around multimedia learning and instructional design. Furthermore, it is consistent with the larger educational imperative of providing students with not only topic knowledge but also the analytical and problem-solving skills required for success in academic and professional settings.

1.1 Statement of the Problem

Specifically, the study sought to answer the following questions:

1. What is the level of visual and auditory digital instructions in facilitating students’ problem-solving skills in terms of content with regards to:

- 1.1. Introduction;
- 1.2. Objectives;
- 1.3. Interactive Elements;
- 1.4. Feedback Mechanism; and
- 1.5. Additional Resources?

2. What is the level of visual and auditory digital instructions in facilitating students’ problem-solving skills in terms of element with regards to:

- 2.1. Narrative Structure;
- 2.2. Visual Creativity;
- 2.3. Sound Design; and
- 2.4. Time Duration?

3. What is the level of students’ problem-solving skills in terms of;

- 3.1. Logical Reasoning
- 3.2. Critical Thinking; and
- 3.2. Analytical Skill?

4. Is there a significant effect between the content of visual and auditory digital instructions and students’ problem-solving skills?

5. Is there a significant effect between the element of visual and auditory digital instructions and students’ problem-solving skills?

2. METHODOLOGY

The study used descriptive research to determine whether visual and auditory digital instructions affect the problem-solving

skills of learners of grade 9 of Lowland Integrated National High School, S.Y. 2023-2024.

The descriptive study approach was utilized by the researcher to determine the effect of utilizing visual and auditory digital instructions to answer mathematical word problems.

In this study, the descriptive research method was applied. Moring (2014) claims that descriptive studies are used to systematically observe, record, and analyze facts or occurrences without manipulating or altering them, especially when the goal is to gain a deep understanding of a specific phenomenon or group, such as studying a population’s characteristics or the prevalence of certain behaviors.

3. RESULTS AND DISCUSSION

In this chapter, the data analysis and results of this study are presented and discussed in detail. The results were presented according to the following main categories: the level of Visual and Auditory Digital Instructions and Students’ Problem-Solving Skills. The main determining factor of response was the effect of visual and auditory digital instructions on students’ problem-solving skills.

Level of visual and auditory digital instructions in facilitating students’ problem-solving skills in terms of content

In this study visual and auditory digital instructions in facilitating students’ problem-solving skills in terms of content include introduction, objectives, interactive elements, feedback mechanism, and additional resources.

Level of visual and auditory digital instructions in facilitating students’ problem-solving skills in terms of content with regards to introduction

Table 1 shows the level of visual and auditory digital instructions in terms of content with regards to introduction. Also shows the statements, mean, standard deviation and remarks.

The introduction effectively sets the tone and expectations for the rest of the content. The mean (M = 4.48) suggests a very high level in terms of content introduction. Also, it provided context and relevance for why problem-solving skills are important in this context. While the mean is lower (M = 4.00), it still indicates that the teachers agree on the validity of the introduction stated on the material.

Table 1. Level of Visual and Auditory Digital Instructions in terms of Content with regards to Introduction

The introduction ...	MEAN	SD	REMARKS
... effectively captured the attention and piqued the interest in the topic.	4.28	0.79	Strongly Agree
... provided a clear overview of what will be covered in the instructional material.	4.36	0.76	Strongly Agree
... provided context and relevance for why problem-solving skills are important in this context.	4.00	0.91	Agree
...effectively sets the tone and expectations for the rest of the content.	4.48	0.65	Strongly Agree
...included elements (e.g., visuals, audio) that enhanced understanding and engagement.	4.32	0.63	Strongly Agree



Weighted Mean	4.29
SD	0.76
Verbal Interpretation	Very High

Table 1 presents the level of visual and auditory digital instructions in terms of content with regards to introduction attained a weighted mean score ($M = 4.29$, $SD = 0.72$) was verbally interpreted as *very high* among the respondents. To sum up, the content introduction effectively captured the attention, provided a clear overview of the instructional material, elicit the importance of problem-solving skills in this context, effectively sets the tone and expectations of the content

and included elements that enhanced understanding and engagement.

Table 2 shows the level of visual and auditory digital instructions in terms of content with regards to objective. Also shows the statements, mean, standard deviation and remarks.

Table 2. Level of Visual and Auditory Digital Instructions in terms of Content with regards to Objectives

The visual and auditory digital instructions...	MEAN	SD	REMARKS
<i>...effectively supported the understanding of the lesson content.</i>	4.48	0.82	Strongly Agree
<i>The lesson's learning objectives were presented through visual and auditory digital instructions.</i>	4.52	0.59	Strongly Agree
<i>The use of visual and auditory digital instructions enhanced the retention and comprehension of the lesson.</i>	4.32	0.69	Strongly Agree
<i>...facilitated a more engaging learning experience.</i>	4.56	0.58	Strongly Agree
<i>...contributed positively to achieving the learning objectives of this lesson.</i>	4.40	0.58	Strongly Agree
Weighted Mean	4.46		
SD	0.65		
Verbal Interpretation	Very High		

Table 2 presents the objective facilitated a more engaging learning experience. The mean ($M = 4.56$) suggests a very high level in terms of content objective. Also, it enhanced the retention and comprehension of the lesson. While the mean is lower ($M = 4.32$), it still indicates that the teachers strongly agree on the validity of the objective stated on the material.

To sum up, the content objective effectively supported the understanding of the lesson content, presented through visual and auditory digital instructions, enhanced the retention and comprehension of the lesson, facilitated a more engaging learning experience, and contributed positively to achieving the learning objectives of this lesson.

The level of visual and auditory digital instructions in terms of content with regards to objective attained a weighted mean score ($M = 4.46$, $SD = 0.65$) was verbally interpreted as *very high* among the respondents.

Table 3 shows the level of visual and auditory digital instructions in terms of content with regards to interactive elements. Also shows the statements, mean, standard deviation and remarks.

Table 3. Level of Visual and Auditory Digital Instructions in terms of Content with regards to Interactive Elements

Interactive Elements...	MEAN	SD	REMARKS
<i>The inclusion of interactive elements (e.g., quizzes, and simulations) in the visual and auditory digital instructions enhanced understanding of the problem-solving process.</i>	4.04	1.06	Agree
<i>...provided opportunities for hands-on learning and practical application of problem-solving techniques.</i>	4.20	1.00	Agree
<i>The visual and auditory digital instructions effectively engaged the attention and kept the focused on the problem-solving task.</i>	4.16	1.07	Agree
<i>...helped the learners to retain and recall the problem-solving steps more effectively compared to static instructions.</i>	4.12	0.83	Agree
<i>The use of interactive elements in the visual and auditory digital instructions can significantly improve problem-solving skills.</i>	4.24	0.78	Strongly Agree
Weighted Mean	4.15		
SD	0.94		
Verbal Interpretation	High		

Table 3 presents the interactive elements significantly improved problem-solving skills. The mean ($M = 4.24$) suggests a very high level in terms of interactive elements content. Also, the interactive elements enhanced understanding

of the problem-solving process. While the mean is lower ($M = 4.04$), it still indicates that the teachers agree on the validity of the interactive elements stated on the material. The level of visual and auditory digital instructions in terms of content with



regards to interactive elements attained a weighted mean score of (M = 4.15, SD = 0.94) was verbally interpreted as *high* among the respondents.

To sum up, the interactive elements enhanced understanding of the problem-solving process, provided opportunities for hands-on learning and practical application of problem-solving techniques, effectively engaged the attention, and kept the focused on the problem-solving task, helped the learners to retain and recall the problem-solving steps more effectively compared to static instructions, and significantly improve problem-solving skills.

Level of Visual and Auditory Digital Instructions in terms of Content with regards to Feedback Mechanism

Table 4 shows the level of visual and auditory digital instructions in terms of content with regards to feedback mechanism. Also shows the statements, mean, standard deviation and remarks.

The feedback mechanism significantly contributes to the improvement of problem-solving skills. The mean (M = 4.56) suggests a very high level in terms of feedback mechanism content. Also, it provides clear and concise feedback during problem-solving tasks. While the mean is lower (M = 4.08), it still indicates that the teachers agree on the validity of the feedback mechanism stated on the material.

Table 4. Level of Visual and Auditory Digital Instructions in terms of Content with regards to Feedback Mechanism

Feedback Mechanism	MEAN	SD	REMARKS
<i>The visual and auditory digital instructions provided clear and concise feedback during problem-solving tasks.</i>	4.08	1.04	Agree
<i>The feedback received through visual and auditory digital instructions helped the learners understand the progress and areas for improvement in problem-solving.</i>	4.36	0.86	Strongly Agree
<i>The visual and auditory digital instructions enhanced the ability to identify and rectify mistakes in problem-solving.</i>	4.32	0.80	Strongly Agree
<i>The feedback provided in the visual and auditory digital instructions was timely and relevant to the problem-solving tasks.</i>	4.12	0.78	Agree
<i>...in the visual and auditory digital instructions can significantly contribute to the improvement of problem-solving skills.</i>	4.56	0.51	Strongly Agree
Weighted Mean	4.29		
SD	0.82		
Verbal Interpretation	Very High		

Table 4 presents the level of visual and auditory digital instructions in terms of content with regards to feedback mechanism attained a weighted mean score (M = 4.29, SD = 0.82) was verbally interpreted as very high among the respondents.

To sum up, the feedback mechanism content provided clear and concise feedback during problem-solving tasks, helped the learners understand the progress and areas for improvement in

problem-solving, enhanced the ability to identify and rectify mistakes in problem-solving, provided a timely and relevant to the problem-solving tasks, and significantly contribute to the improvement of problem-solving skills.

Table 5 shows the level of visual and auditory digital instructions in terms of content with regards to additional resources. Also shows the statements, mean, standard deviation and remarks.

Table 5. Level of Visual and Auditory Digital Instructions in terms of Content with regards to Additional Resources

Additional Resources	MEAN	SD	REMARKS
<i>The inclusion of additional resources (e.g., diagrams, charts, supplemental materials) enhanced understanding of the instructions.</i>	4.36	0.91	Strongly Agree
<i>The visual and auditory digital instructions provided clarity and helped the learners to grasp the problem-solving steps more effectively.</i>	4.24	0.97	Strongly Agree
<i>...aided in visualizing complex concepts, making problem-solving more manageable.</i>	4.20	0.76	Agree
<i>The use of visual and auditory digital instructions improved the ability to apply problem-solving techniques.</i>	4.20	0.87	Agree
<i>The presence of additional resources in the visual and auditory digital instructions positively impacted the problem-solving skills.</i>	4.36	0.70	Strongly Agree
Weighted Mean	4.27		
SD	0.84		
Verbal Interpretation	Very High		



Table 5 presents the additional resources enhanced understanding of the instructions and positively impacted the problem-solving skills. The mean ($M = 4.36$) suggests a very high level in terms of additional resources content. Also, aided in visualizing complex concepts, making problem-solving more manageable and improved the ability to apply problem-solving techniques. While the mean is lower ($M = 4.20$), it still indicates that the teachers agree on the validity of the additional resources stated on the material.

The level of visual and auditory digital instructions in terms of content with regards to additional resources attained a weighted mean score ($M = 4.27$, $SD = 0.84$) was verbally interpreted as very high among the respondents.

To sum up, the additional resources content enhanced understanding of the instructions, provided clarity, and helped the learners to grasp the problem-solving steps more

effectively, aided in visualizing complex concepts, making problem-solving more manageable, improved the ability to apply problem-solving techniques, and positively impacted the problem-solving skills.

The level of visual and auditory digital instructions in facilitating students' problem-solving skills in terms of element

In this study visual and auditory digital instructions in facilitating students' problem-solving skills in terms of element include narrative structure, visual creativity, sound design, and time duration.

Table 6 shows the level of visual and auditory digital instructions in terms of element with regards to narrative structure. Also shows the statements, mean, standard deviation and remarks.

Table 6. Level of Visual and Auditory Digital Instructions in terms of Element with regards to Narrative Structure

The Narrative Structure...	MEAN	SD	REMARKS
<i>The visual and auditory digital instructions effectively establish a clear narrative structure to convey the problem-solving process.</i>	4.32	0.63	Strongly Agree
<i>The audio-visual elements (e.g., visuals, voice-over) are synchronized in a way that enhances the overall coherence and flow of the instructional content.</i>	3.92	1.08	Agree
<i>The use of visual and auditory digital instructions effectively guides the viewer through each step of the problem-solving process, maintaining a logical sequence.</i>	4.20	1.00	Agree
<i>...of the visual and auditory digital instructions assists in clarifying the relationships between different concepts and steps involved in problem-solving.</i>	4.36	0.70	Strongly Agree
<i>The visual and auditory digital instructions contribute significantly to the viewer's understanding and retention of the problem-solving methodology.</i>	4.16	0.90	Agree
Weighted Mean		4.19	
SD		0.88	
Verbal Interpretation		High	

Table 6 presents the narrative structure effectively establishes a clear narrative structure to convey the problem-solving process. The mean ($M = 4.36$) suggests a very high level in terms of narrative structural element. Also, it synchronized in a way that enhances the overall coherence and flow of the instructional content. While the mean is lower ($M = 3.92$), it still indicates that the teachers agree on the validity of the narrative structure stated on the material. The level of visual and auditory digital instructions in terms of element with regards to narrative structure attained a weighted mean score of ($M = 4.19$, $SD = 0.88$) was verbally interpreted as high among the respondents.

To sum up, the narrative structural element effectively establish a clear narrative structure to convey the problem-solving process, synchronized in a way that enhances the overall coherence and flow of the instructional content, effectively guides the viewer through each step of the problem-solving process, maintaining a logical sequence, assists in clarifying the relationships between different concepts and steps involved in problem-solving and contribute significantly to the viewer's

understanding and retention of the problem-solving methodology.

Level of Visual and Auditory Digital Instructions in terms of Element with regards to Visual Creativity

In this study visual and auditory digital instructions in facilitating students' problem-solving skills in terms of element with regards to visual creativity.

Table 7 shows the level of visual and auditory digital instructions in terms of element with regards to visual creativity. Also shows the statements, mean, standard deviation and remarks.

Table 7 presents visual creativity effectively utilizes innovative visual elements to enhance understanding and engagement. The mean ($M = 4.76$) suggests a high level in terms of visual creative element. Also, it complements the content effectively, making complex concepts easier to grasp. While the mean is lower ($M = 3.40$), it still indicates that the teachers agree on the validity of the visual creativity stated on the material.



Table 7. Level of Visual and Auditory Digital Instructions in terms of Element with regards to Visual Creativity

The Visual Creativity...	MEAN	SD	REMARKS
<i>The visual and auditory digital instructions in the research effectively utilize innovative visual elements to enhance understanding and engagement.</i>	4.76	0.88	Strongly Agree
<i>The visual components of the instructions are thoughtfully designed and contribute significantly to the overall learning experience.</i>	3.96	1.14	Agree
<i>The use of visual aids in the visual and auditory digital instructions complements the content effectively, making complex concepts easier to grasp.</i>	3.40	1.35	Agree
<i>...of the visual and auditory digital instructions positively effects students' problem-solving skills.</i>	3.48	1.56	Agree
<i>Overall, the visual creativity of the visual and auditory digital instructions significantly enhances the learning experience for students.</i>	4.32	0.90	Strongly Agree
Weighted Mean		3.98	
SD		1.28	
Verbal Interpretation		High	

The level of visual and auditory digital instructions in terms of element with regards to visual creativity attained a weighted mean score (M = 3.98, SD = 1.28) was verbally interpreted as high among the respondents.

To sum up, the visual creative element effectively utilizes innovative visual elements to enhance understanding and engagement, thoughtfully designed and contribute significantly to the overall learning experience, complements the content

effectively, making complex concepts easier to grasp, positively effects students' problem-solving skills and significantly enhances the learning experience for students.

Table 8 shows the level of visual and auditory digital instructions in terms of element with regards to sound design. Also shows the statements, mean, standard deviation and remarks.

Table 8. Level of Visual and Auditory Digital Instructions in terms of Element with regards to Sound Design

Sound Design	MEAN	SD	REMARKS
<i>The clarity of audio instructions significantly enhanced understanding of the problem-solving tasks.</i>	4.96	0.20	Strongly Agree
<i>The volume levels of the audio instructions were appropriate and did not cause any confusion or discomfort.</i>	4.24	1.01	Strongly Agree
<i>The use of audio cues and prompts effectively guided the learners through the problem-solving process.</i>	4.32	1.07	Strongly Agree
<i>The quality of the audio (e.g., absence of background noise, clear articulation) positively contributed to the learning experience.</i>	3.88	1.33	Agree
<i>The synchronization of audio with visual elements in the instructions was seamless and aid in comprehension.</i>	4.28	1.34	Strongly Agree
Weighted Mean		4.34	
SD		1.11	
Verbal Interpretation		Very High	

The sound design significantly enhanced understanding of the problem-solving tasks. The mean (M = 4.96) suggests a very high level in terms of sound design element. Also, it positively contributed to the learning experience. While the mean is lower (M = 3.88), it still indicates that the teachers agree on the validity of the sound design stated on the material.

The level of visual and auditory digital instructions in terms of element with regards to sound design attained a weighted mean score (M = 4.34, SD = 1.11) was verbally interpreted as very high among the respondents.

To sum up, the sound design element significantly enhanced understanding of the problem-solving tasks, were appropriate and did not cause any confusion or discomfort, effectively

guided the learners through the problem-solving process, positively contributed to the learning experience, and was seamless and aid in comprehension.

Level of Visual and Auditory Digital Instructions in terms of Element with regards to Time Duration

In this study visual and auditory digital instructions in facilitating students' problem-solving skills in terms of element with regards to time duration.

Table 9 shows the level of visual and auditory digital instructions in terms of element with regards to time duration. Also shows the statements, mean, standard deviation and remarks.



Table 9. Level of Visual and Auditory Digital Instructions in terms of Element with regards to Time Duration

Time Duration	MEAN	SD	REMARKS
<i>The length of visual and auditory digital instructions provided was appropriate for the content presented.</i>	4.48	0.77	Strongly Agree
<i>The duration of visual and auditory digital instructions allowed the learners to grasp the key concepts effectively.</i>	4.16	0.99	Agree
<i>The time allotted for visual and auditory digital instructions enhanced problem-solving skills.</i>	4.28	1.02	Strongly Agree
<i>The duration of visual and auditory digital instructions was balanced with the time spent on other learning activities.</i>	4.16	0.99	Agree
<i>...of visual and auditory digital instructions would have improved the learning experience.</i>	4.32	0.75	Strongly Agree
Weighted Mean	4.28		
SD	0.90		
Verbal Interpretation	Very High		

The time duration provided was appropriate for the content presented. The mean ($M = 4.48$) suggests a very high level in terms of element time duration. Also, it allowed the learners to grasp the key concepts effectively and was balanced with the time spent on other learning activities. While the mean is lower ($M = 4.16$), it still indicates that the teachers agree on the validity of the time duration stated on the material.

The level of visual and auditory digital instructions in terms of element with regards to time duration attained a weighted mean score ($M = 4.28$, $SD = 0.90$) was verbally interpreted as very high among the respondents.

To sum up, the element provided was appropriate for the

content presented, allowed the learners to grasp the key concepts effectively, enhanced problem-solving skills, was balanced with the time spent on other learning activities and would have improved the learning experience.

Level of Students' Problem-Solving Skills

In this study the students' problem-solving skills include narrative structure, visual creativity, sound design, and time duration.

Table 10 shows the distribution of scores indicating the level of students' problem-solving skills in terms of logical reasoning. The descriptive values provide an interpretation of the corresponding score ranges.

Table 10. Level of Students' Problem-Solving Skills in terms of Logical Reasoning

Score	Frequency	Percentage	Remarks
13-15	11	14%	Outstanding
10-12	14	18%	Very Satisfactory
7-9	30	38%	Satisfactory
4-6	21	27%	Fairly Satisfactory
1-3	2	3%	Did Not Meet Expectations
Weighted Mean = 8.49		100%	Multi-Structural

Table 10 presents the frequency distribution that most students fall within the satisfactory or multi-structural level of logical reasoning skills in problem-solving tasks, with thirty (30) or the thirty-eight percent (38%) of students scoring between 7 and 9. Additionally, it is noteworthy that fourteen (14) or eighteen percent (18%) of students scored in the range of 10 to 12, indicating a very satisfactory or relational level of proficiency in logical reasoning when tackling problem-solving tasks. Furthermore, eleven (11) or the fourteen percent (14%) of students achieved scores in the range of 13 to 15, classified as outstanding or extended abstract level of logical reasoning to solve problems.

Conversely, twenty-one (21) or twenty-seven percent (27%) of students scored in the range of 4 to 6, categorized as fairly satisfactory or unistructural level in their logical reasoning skill. And two (2) or three percent (3%) of students scored between

1 to 3, signifying that they did not meet expectations or pre-structural level of logical reasoning skills for problem-solving tasks. Overall, the mean score of 8.49 suggests a multi-structural level of logical reasoning, indicating that the students demonstrate satisfactory to outstanding in problem-solving skills.

Table 11 shows the distribution of scores indicating the level of students' problem-solving skills in terms of critical thinking. The descriptive values provide an interpretation of the corresponding score ranges.

Table 11 presents the frequency distribution that most students fall within the satisfactory or multi-structural level of critical thinking skills in problem-solving tasks, with sixty-two (62) or the seventy-nine percent (79%) of students scoring between 7 and 9.



Table 11. Level of Students' Problem-Solving Skills in terms of Critical Thinking

Score	Frequency	Percentage	Remarks
13-15	12	15%	Outstanding
10-12	4	5%	Very Satisfactory
7-9	62	79%	Satisfactory
4-6	0	0%	Fairly Satisfactory
1-3	0	0%	Did Not Meet Expectations
Weighted Mean = 9.95		100%	Relational

Additionally, it is noteworthy that four (4) or the five percent (5%) of students scored in the range of 10 to 12, indicating a very satisfactory or relational level of proficiency in critical thinking when tackling problem-solving tasks.

Furthermore, twelve (12) or fifteen percent (15%) of students achieved scores in the range of 13 to 15, classified as outstanding or extended abstract level of critical thinking to solve problems.

Interestingly, no students scored within the ranges of 4-6 or 1-3, indicating that none of the students were classified as fairly

satisfactory or did not meet expectations in terms of logical reasoning skills.

Overall, the mean score of 9.95 suggests a relational level of critical thinking, indicating that the students demonstrate satisfactory to outstanding in problem-solving skills.

Table 12 shows the distribution of scores indicating the level of students' problem-solving skills in terms of analytical skill. The descriptive values provide an interpretation of the corresponding score ranges.

Table 12. Level of Students' Problem-Solving Skills in terms of Analytical Skills

Score	Frequency	Percentage	Remarks
13-15	25	32%	Outstanding
10-12	6	8%	Very Satisfactory
7-9	47	60%	Satisfactory
4-6	0	0%	Fairly Satisfactory
1-3	0	0%	Did Not Meet Expectations
Weighted Mean = 10.74		100%	Relational

Table 12 presents the frequency distribution that most students fall within the satisfactory or multi-structural level of analytical skill in problem-solving tasks, with forty-seven (47) or sixty percent (60%) of students scoring between 7 and 9.

Additionally, it is noteworthy that six (6) or eight percent (8%) of students scored in the range of 10 to 12, indicating a very satisfactory or relational level of proficiency in analytical skills when tackling problem-solving tasks.

Furthermore, twenty-five (25) or thirty-two percent (32%) of students achieved scores in the range of 13 to 15, classified as outstanding or extended abstract level of analytical skill to solve problems.

Interestingly, no students scored within the ranges of 4-6 or 1-3, indicating that none of the students were classified as fairly

satisfactory or did not meet expectations in terms of analytical skill.

Overall, the mean score of 10.74 suggests a relational level of analytical skill, indicating that the students demonstrate satisfactory to outstanding in problem-solving skills.

Effect of the Content and Element of Visual and Auditory Digital Instructions on Students' Problem-Solving Skills

To test the significant effect of the content and element of visual and auditory digital instructions on students' problem-solving skills data were treated statistically using Minitab 14 using the T-test, and associated p-values.

Table 13 shows the results of the statistical analysis of the significant effect of the content of visual and auditory digital instructions on students' problem-solving skills.

Table 13. Significant Effect of the Content of Visual and Auditory Digital Instructions on Students' Problem-Solving Skills

Visual And Auditory Digital Instructions	Students' problem-Solving Skills	T-value	P-value	Analysis
Content	Logical Reasoning	5.314	0.000	significant
	Critical Thinking	6.004	0.000	significant
	Analytical skill	2.997	0.002	significant

*significant at .05 level of significance

Visual and auditory digital instructions' content show a significant effect on students' problem-solving skills (p = 0.000

to 0.002). The results suggest that the content of the Visual & Auditory Digital Instruction significantly influences students'



problem-solving skills. This underscores the importance of carefully designing and implementing instructional content and elements in digital environments to enhance students' problem-solving abilities.

Table 14. Significant Effect of the Element of Visual and Auditory Digital Instructions on Students' Problem-Solving Skills

Visual And Auditory Digital Instructions	Students' problem-Solving Skills	T-value	P-value	Analysis
Element	Logical Reasoning	4.896	0.000	significant
	Critical Thinking	5.432	0.000	significant
	Analytical skill	2.519	0.007	significant

**significant at .05 level of significance*

Table 14 shows the results of the statistical analysis of the significant effect of the element of visual and auditory digital instructions on students' problem-solving skills.

Visual and auditory digital instructions' elements show a significant effect on students' problem-solving skills ($p = 0.000$ to 0.007). The results suggest that the content of the Visual & Auditory Digital Instruction significantly influences students' problem-solving skills. This underscores the importance of carefully designing and implementing instructional content and elements in digital environments to enhance students' problem-solving abilities.

4. CONCLUSION AND RECOMMENDATIONS

The students showed multi-structural level of problem-solving skills. Also, they exhibited relational level of logical reasoning, relational level of critical thinking and relational level of analytical skill.

The findings indicate that the content of visual and auditory digital instructions influenced students' problem-solving skills. Similarly, it indicates that the element of visual and auditory digital instructions influenced students' problem-solving skills.

Therefore, facilitating students through visual and auditory digital instructions improve students' problem-solving skills.

With the confirmation of a significant effect of visual and auditory digital instructions on students' problem-solving skills, it is imperative for educational institutions, curriculum developer and instructional providers to harness the potential of visual and auditory digital instructions to optimize problem-solving outcomes. As such, the following recommendations are proposed to capitalize on the study's findings:

1. Educators should adopt a multimodal approach to instruction, leveraging both visual and auditory stimuli to cater to diverse learning preferences and enhance engagement.
2. Learners may engage not only with interactive multimedia components, audiovisual presentations, and simulations but also with visual and auditory digital instructions. This interaction fosters an immersive learning environment conducive to the development of critical problem-solving skills and practical knowledge essential for academic success.
3. Encouraging collaborative research endeavors and partnerships between academia, industry, and technology providers can drive innovation in digital instructional design.

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PEER ASSISTED LEARNING STRATEGY BASED ON THE LEARNING STYLES TO THE TECHNICAL SKILLS IN MENSURATION AND CALCULATION OF GRADE 7 STUDENTS

Girley Jane Altez Dequito

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This research intends to measure the Grade 7 students' technical skills in measurement and calculation using a peer-assisted learning strategy based on the learning styles. Specifically, it sought to determine the level of the student's learning styles and use peer-assisted learning strategies in teaching measurement and calculation. The student's technical skills will also be identified before and after using peer-assisted learning strategies and groups according to the learning styles. Also, the significant difference in the students' technical skills using peer-assisted learning strategies on their learning styles and the considerable effect of peer-assisted learning strategies on the students' technical skills as a group according to their learning styles were evaluated.

The researcher employed a quantitative research design, particularly the correlational method. The respondents were 90 Grade 7 students who were purposively chosen. The research locale was Binahaan Integrated School at Pagbilao, Quezon. The researcher used a standardized questionnaire adapted from B.J.U. Press by De Haven (2021) to determine the student's learning style profiles and developed a self-made questionnaire, a pre-test, and a post-test questionnaire as the primary research instruments used to gather data. The mean and standard deviation, paired T-test, and regression statistical tools were used.

The findings revealed students' great extent of learning styles in terms of auditory, interpersonal, verbal, and visual. The use of peer-assisted learning strategies in teaching mensuration and calculation based on the student's learning styles in terms of the jigsaw method, peer demonstration, peer-led-discussion, peer tutoring, and think-pair-share were to a very great extent, too. The student's technical skills were very satisfactory before and after using peer-assisted learning strategies according to their learning styles in comprehension, critical thinking, problem-solving, and spatial visualization. It was found that there was a significant difference in the student's technical skills using peer-assisted learning strategies as a group according to their learning styles, and lastly, it was found that peer-assisted learning strategies. The jigsaw method significantly affected the students' critical thinking strategies but had no significant effect on the student skills group according to their learning styles.

Based on the findings, it was concluded that there was a significant difference in student technical skills using peer-assisted learning strategies as a group according to their learning styles; therefore, the first null hypothesis was rejected. Furthermore, peer-assisted learning strategies in terms of the jigsaw method only showed a significant effect on the student's technical skills in terms of critical thinking, while other indicators did not affect students' technical skills as a group according to their learning styles; therefore, the second null hypothesis was accepted.

The researcher recommends the utilization of peer-assisted learning strategies as an alternative strategy to teach measurement and calculation. Teachers must teach the subject as it motivates and increases students' technical skills.

KEYWORDS: students' technical skills; peer-assisted learning; learning styles

1. INTRODUCTION

One of the most crucial aspects of life is education. It provides someone with the know-how and abilities needed to contribute to society usefully. The K-12 program's overarching objective demonstrated how important it is to teach TLE to achieve the curriculum's overall objective.

Students who use the peer-assisted learning strategy (PALS) assist one another in their academic endeavors. P.A.L. includes many student activities, such as group projects and discussions. It aims to enhance participating students' cooperative skills and academic skills. This novel approach to education is an euphemism for bilateral, reciprocal learning exchanges in which students learn under the support and guidance of their peers. These exchanges benefit all students by encouraging their active participation in the learning process.

Furthermore, there are numerous ways to define learning styles. These are typically broad trends that give instruction and learning a direction. Another way to think of learning style is as a collection of elements, attitudes, and behaviors that help a person know in a particular setting. It affects how pupils engage, learn, and work together. The students' diverse learning styles are essential to address to give the best learning experience for the students. Every learner has a unique preferred way of perceiving, organizing, and remembering information. The cognitive, affective, and physiological behaviors that characterize these learning styles show how students perceive, engage with, and react to the learning environment. They also show how students learn in different ways from one another.

Technical skills are the specific knowledge and proficiency needed to carry out particular tasks and use specific tools and



programs in practical settings. Mensuration and computation can be used in real-world scenarios in many workplace areas, so students must adjust their foundational knowledge and ideas. These issues are addressed in RA 10533, the "Enhanced Basic Education Act of 2013," which aims to improve the Philippine Basic Education System by offering various practical approaches and fortifying the curriculum, particularly in T.L.E. (Asuncion 2021). Other competencies will only improve if students acquire these abilities since incorrect measurements or calculations will result in subpar work. Since teaching students to apply fundamental mathematical operations is another mountain to climb, it becomes a challenge for all TLE teachers.

The researcher determines the students' profiles based on their learning styles and attempts to study their learning styles, the level of peer-assisted learning strategies in teaching measurement, and calculations based on the student's learning styles.

Primarily, this study also seeks out the level of the student's technical skills in measurement and calculation. Grade 7 students before and after using peer-assisted strategies and groups according to their learning styles that allow them to practice their social skills with peers.

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the level of students learning styles in terms of:
 - 1.1 Auditory;
 - 1.2 Interpersonal;
 - 1.3 Verbal; and
 - 1.4 Visual?
2. What is the level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles in terms of:
 - 2.1 Jigsaw Method
 - 2.2 Peer demonstration
 - 2.3 Peer-led- discussion
 - 2.4 Peer tutoring, and
 - 2.5 Think Pair- Share?
3. What are the students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of:

- 3.1 Comprehension
- 3.2 Critical thinking;
- 3.3 Problem Solving, and
- 3.4 Spatial visualization?

4. Is there a significant difference in student technical skills using peer-assisted learning strategies as a group according to their learning styles?
5. Do peer-assisted learning strategies significantly affect the student's technical skills according to their learning styles?

2. METHODOLOGY

This study used a quantitative research design, particularly the correlational method in nature that aims to determine the profile of the students based on their learning styles, determine the level of students' learning styles, determine the level of using peer-assisted learning strategies in teaching mensuration and calculation based on the learning styles, and the level of student technical skills before and after using peer-assisted learning strategies and group according to their learning styles of Grade 7 Students'. This research method was correlational since it involved collecting data and interpreting it to determine the relationship among the variables and the study's desired results.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results yielded from the treatment of the data gathered in this study.

Level of Students' Learning Styles

Awareness of students' learning styles and preferences will eventually lead to more effective learning experiences. In this study, the level of students' learning styles was described in terms of auditory, interpersonal, verbal, and visual, and this was determined by weighted mean and standard deviation.

Level of Students' Auditory Learning Style

The data in Table 1 illustrates below the level of students' auditory learning style
 Auditory learners tend to believe they retain information heard in the class better (M=3.07, SD=0.70). Furthermore, they tend to listen to oral instruction from their peers effectively for learning rather than themselves (M=2.87, SD=0.75).

Table 1 Level of Students' Auditory Learning Style

STATEMENTS	MEAN	SD	REMARKS
I remember things I heard in class better than I remembered what I had read.	3.07	0.70	Agree
I learn better in class when my peers teach us orally.	2.88	0.63	Agree
I can remember the lesson much better by listening to my peers, who provide information, explanations, and discussions.	2.91	0.74	Agree
I understand how to do something if someone tells me, rather than having to read the same things to myself.	2.87	0.75	Agree
When I hear about new ideas or lessons. I immediately start working out how to apply it in practice.	2.90	0.67	Agree
Weighted Mean		2.92	
SD		0.43	
Verbal Interpretation		Great Extent	



The level of students' learning styles in terms of auditory attained a weighted mean score of 2.92 and a standard deviation of 0.43, which was a great extent, as viewed by the respondents. This means that auditory learners possess strong listening skills, allowing them to comprehend spoken information effectively.

Thus, they enjoy discussion group activities that are more interactive or when they can listen and participate actively. They are more engaged in the lecture method of teaching and learning.

Table 2 Level of Students' Interpersonal Learning Style

STATEMENTS	MEAN	SD	REMARKS
I learn best when I work with groups and pairs.	3.24	0.48	Agree
I am usually open to getting to know people's ideas and establishing relationships with them.	2.91	0.74	Agree
I learn by helping and teaching others through a collaboration approach.	3.04	0.69	Agree
I enjoy building good and healthy relationships with my classmates and team members.	2.93	0.75	Agree
I learn easily when I am with my peers and classmates.	2.96	0.75	Agree
Weighted Mean		3.02	
SD		0.41	
Verbal Interpretation		Great Extent	

Table 2 illustrates the level of students' interpersonal learning style

Interpersonal learners tend to believe they learn easily when working with their groupmates and peers (M=3.24, SD=0.48). Furthermore, they tend to understand other ideas from their peers, which leads to good relationships (M=2.91, SD=0.74).

The level of students' learning styles in terms of interpersonal attained a weighted mean score of 3.02 and a standard deviation of 0.41, which was a great extent, as viewed by the respondents. Interpersonal learners possess good communication skills and can efficiently work and interact with other groupmates and pairs. Thus, they have more fun learning through collaboration and peer interaction, building good connections. Learners with this learning style have a strength of good leadership in leading others.

Table 3 Level of Students' Verbal Learning Style

STATEMENTS	MEAN	SD	REMARKS
I enjoy giving tutorials and sharing knowledge with others.	3.07	0.65	Agree
I find it more useful and effective when I read aloud.	3.07	0.65	Agree
I learn easily when I share and speak my ideas to others.	3.03	0.76	Agree
I learn well by demonstrating particular skills.	3.14	0.70	Agree
I can explain things through discussions and debates.	3.07	0.63	Agree
Weighted Mean		3.08	
SD		0.34	
Verbal Interpretation		Great Extent	

Table 3 illustrates students' verbal learning style. Verbal learners believe they learn well by demonstrating particular skills through discussion (M=3.14, SD=0.70). Furthermore, they tend to speak and share their ideas with others (M=3.03, SD=0.65).

The level of students' learning styles in terms of Verbal attained a weighted mean score of 3.08 and a standard deviation of 0.34 and was Great Extent as viewed by the respondents. This means verbal learners excel in language-based activities, using words to learn and communicate. They also enjoy reading, writing, speaking, and listening activities.

Table 4 Level of Students' Visual Learning Style

STATEMENTS	MEAN	SD	REMARKS
I prefer to see information written on a board and supplementary materials.	3.21	0.63	Agree
I prefer to use pictures and spatial understanding in learning the lesson.	3.11	0.76	Agree
I understand the concept quickly by looking at the diagrams and graphs.	3.06	0.68	Agree
I remember better when I read between the lines.	3.13	0.72	Agree
I learn easily when I watch video presentations.	2.97	0.66	Agree
Weighted Mean		3.10	
SD		0.39	
Verbal Interpretation		Great Extent	

Table 4 illustrates the level of students' visual learning style

Visual learners tend to believe that they prefer to learn when the information is written and the supplementary materials are



viewed (M=3.21, SD=0.63). Furthermore, they tend to remember when watching video presentations (M=2.97, SD=0.66).

The level of students' learning styles in terms of Visual attained a weighted mean score of 3.10 and a standard deviation of 0.39 and was a Great Extent as viewed by the respondents. This further means that the respondents learning styles in terms of visuals can learn best when they see supplementary materials like pictures, diagrams, graphs or even video presentations. Learners with this learning style are more interested in learning the content through visual thinking using different graphics.

Level of Using Peer-Assisted Learning Strategies Awareness of the level of using peer-assisted learning strategies in teaching mensuration and calculation is important for the students'

learning process. This study described the jigsaw method, peer demonstration, peer-led- discussion, peer tutoring, and think-pair-share, which was determined by weighted mean and standard deviation.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Jigsaw Method

Table 5 illustrates below the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Jigsaw method. Jigsaw Method auditory learners tend to analyze the discussion after listening to the discussion during class (M=3.50, SD=0.51). Furthermore, learners tend to lessen their pressure when listening and working as a group (M=3.18, SD=0.50).

Table 5 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Jigsaw Method

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I can follow activities more efficiently when I hear my classmates share the information verbally.	3.23	0.43	Agree
I can easily grasp the idea I listened from the discussion of my classmates.	3.32	0.65	Strongly Agree
I feel less pressure working together when I listened to my classmates discussion about the topic mensuration and calculation.	3.18	0.50	Agree
I can understand the process of computing the problem when I concentrate on my classmate's explanation.	3.27	0.55	Strongly Agree
I can give insights or clarification about the topic after listening to my groupmates/classmates discussion.	3.50	0.51	Strongly Agree
	3.30	0.53	VGE
Interpersonal			
I can easily understand the topic about mensuration and calculation when I listened with my classmates.	3.27	0.60	Strongly Agree
I can finish the task easily on time when I engaged myself with the discussion of my groupmates or classmates.	3.19	0.69	Agree
I can learn the formulas in mensuration and calculation when I worked with group.	3.38	0.64	Strongly Agree
I can easily identify my errors in the problem solving when I asked and worked with other people.	3.27	0.72	Strongly Agree
I feel confident with my answer in a certain problem solving if I discuss and ask other people about it.	3.42	0.58	Strongly Agree
	3.31	0.65	VGE
Verbal			
I am comfortable talking with my groupmates about the topic in mensuration and calculation.	3.37	0.60	Strongly Agree
I know how to solve a certain problem about the topic when it is discussed in group.	3.21	0.79	Agree
I often talk with my classmates about the lesson in mensuration and calculation.	2.89	0.88	Agree
I feel more comfortable asking for clarification to my groupmates whenever I don't understand the topic.	3.21	0.79	Agree
I communicate with my group every time I want to clarify something about the topic.	3.11	0.74	Agree
	3.16	0.76	GE
Visual			
I more comfortable in understanding the formula when my classmate shows and explains it well.	3.14	0.35	Agree
I can easily recognize and understand the operations when it is surrounded by a lot of signs and symbols.	3.14	0.71	Agree
I take a short period of time to understand the topic in the collaborative work	3.00	0.76	Agree



when it is explained using the visual materials.

I can easily notice and understand the errors in the activity when I see the visual representation of the activity.

3.27

0.55

Strongly Agree

I can solve the problem in mensuration and calculation if I see the formula if it is written and discussed in group.

3.41

0.59

Strongly Agree

3.19

0.61

GE

Weighted Mean

3.24

SD

0.64

Verbal Interpretation

Very Great Extent

The level of using peer-assisted learning strategies in teaching mensuration in calculation based on the students auditory learning styles jigsaw method attained a weighted mean of 3.30 and standard deviation of 0.53 and was a very great extent as viewed by the respondents. This means that learners tend to easily understand the learning discussion through the help of their classmates by sharing their ideas and thoughts through listening with collaboration.

Interpersonal learners tend to believe they are confident in answering problems when they are with peers (M=3.42, SD=0.58). Furthermore, they tend to finish the task on time when they are working with their groupmates and classmates (M=3.19, SD=0.69). The level of peer Assisted learning strategies in teaching mensuration and calculation based on the students' interpersonal learning styles.

The jigsaw method attained a weighted mean of 3.31 and a standard deviation of 0.65, which was a great extent as the respondents viewed. This means the learners are more confident with their groupmates and peers while answering the activities. Thus, they quickly learn and finish the task with their peers and group mates.

Verbal learners feel more comfortable talking to their peers and groupmates while learning (M=3.37, SD=0.60). Furthermore, learners tend to discuss the lesson with their peers to deepen their understanding (M=2.89, SD=0.88). The level of using peer assisted learning strategies in teaching mensuration and calculation based on the students' verbal learning styles jigsaw method attained a weighted mean of 3.16 and standard deviation of 0.76 and was very great extent. This means learners are more comfortable talking and communicating with their peers and groupmates while learning. Thus, they learn through interaction and brainstorming with others.

Visual learners believe they can quickly solve the problem by viewing the written formulas and discussing them in groups (M=3.41, SD=0.59). Furthermore, learners tend to shorten their

time learning the topic when working together as a team or group and by explaining the topic using visual materials (M=3.00, SD=0.76). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the visual learning styles jigsaw method attained a weighted mean of 3.24 and standard deviation of 0.64 and was a very great extent as viewed by the respondents. This means that the learners effectively learn when they see the actual materials or use supporting visual aids that help learners to visualize and understand a particular topic easily.

The level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Jigsaw Method attained a weighted mean score of 3.24 and a standard deviation of 0.64 and was Very Great Extent as viewed by the respondents. This means that this method helps the learners exhibit a good and positive learning process, and cooperative learning improves the students' skills and learning.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Demonstration

Table 6 illustrates the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Peer demonstration.

Auditory learners tend to believe they can demonstrate the lesson when they are listening and interacting with their groupmates' explanation (M=3.50, SD=0.51). Furthermore, the learner tends to understand the lesson when the demonstrator has a clear tone of voice (M=3.09, SD=0.61). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' auditory learning styles peer demonstration attained a weighted mean of 3.26 and standard deviation of 0.66 and was very great extent as viewed by the respondents. This means the learners are more confident to demonstrate when their groupmates and peers support them.

Table 6 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Demonstration

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I can pay more attention to the voices of my classmates when they exhibit the topic or the lesson.	3.23	0.69	Agree
I create more opportunities to listen to my groupmates' demonstrations.	3.23	0.53	Agree
After listening to my groupmates' explanations, I can demonstrate how a certain problem was solved.	3.50	0.51	Strongly Agree
I can easily understand the lesson when my classmate demonstrates the lesson with clarity of voice.	3.09	0.61	Agree



I pay more attention to how my classmates explain the process than to knowing the answer.	3.27	0.88	Strongly Agree
	3.26	0.66	VGE
Interpersonal			
I can understand the lesson when I am part of the topic demonstration.	3.46	0.51	Strongly Agree
I have more opportunities to identify the errors committed to solving problems when I engage myself in exhibiting the lesson.	3.31	0.62	Strongly Agree
I can have a deeper understanding of the lesson when it is executed in collaborative work.	3.50	0.51	Strongly Agree
I can think critically about the problem when I involve myself in the peer demonstration.	3.42	0.50	Strongly Agree
When done in a group, I can have a wide range of possibilities to discuss certain difficulties in the lesson.	3.38	0.57	Strongly Agree
	3.42	0.54	VGE
Verbal			
I am more participative if I involve myself and speak my insights during the peer demonstration.	3.05	0.85	Agree
I can expand my knowledge about the topic if the conversation is involved.	2.84	0.90	Agree
I enhance my competence and skill about the topic when I speak about it with other people.	3.32	0.67	Strongly Agree
I learn the topic when I communicate more during the peer demonstration.	3.00	0.82	Agree
I emphasize how I explained the lesson in exhibiting the process during group work.	3.16	0.76	Agree
	3.07	0.80	GE
Visual			
I understand the lesson well if I can see how my groupmates demonstrate the topic.	3.14	0.35	Agree
I can exhibit the lesson well in collaborative works when provided by visual materials.	3.14	0.71	Agree
I am less confused if the process in solving a particular problem is presented with pictures and graphic organizers when it is demonstrate by peer.	3.00	0.76	Agree
I tend to concentrate more on the visuals when peer demonstration is ongoing.	3.27	0.55	Strongly Agree
I can confidently demonstrate what I learn about the topic through peer demonstration using different visual materials.	3.41	0.59	Strongly Agree
	3.19	0.61	GE
Weighted Mean		3.24	
SD		0.65	
Verbal Interpretation		Very Great Extent	

Interpersonal learners tend to deeply understand the lesson in more collaborative ways when the lesson is well demonstrated in more interactive execution (M=3.50, SD=0.51). Furthermore, they tend to identify the errors committed when they engaged their self and groupmates in the activities together (M=3.31, SD=0.62). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the interpersonal learning styles peer demonstration attained a weighted mean of 3.42 and standard deviation of 0.54, which was a very great extent, as viewed by the respondents. This means learners enjoy the demonstration activities more when involving each other.

Verbal learners tend to believe they are competent when communicating and interacting with other people during the demonstration (M=3.32, SD=0.67). Furthermore, learners tend to participate more in demonstrations that expand knowledge and create good conversation (M=2.84, SD=0.90). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles peer demonstration attained a weighted mean of 3.07 and a standard deviation of 0.80, which was a great extent, as viewed by the respondents. This means that the learners enhance their knowledge and skills through demonstration through communication with their groupmates and peers; thus, they are

confident in sharing and expressing their thoughts without hesitation.

Visual learners tend to believe they confidently demonstrate the lesson with the help of their peers and are supported by the visual materials (M=3.41, SD=0.59). Furthermore, learners tend to lessen their problem-solving confusion when their peers are presented with visual materials that can help them solve it correctly (M=3.00, SD=0.76). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' visual learning styles peer demonstration attained a weighted mean of 3.19 and standard deviation of 0.61 and was a great extent as viewed by the respondents. This means learners confidently demonstrate and share their ideas with peers supported by visual materials or aids.

The level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Peer demonstration attained a weighted mean score of 3.24 and a standard deviation of 0.65 and was Very Great Extent among the respondents. This means that the learners can develop their demonstration skills with the help of their groupmates and peers. Additionally, peer demonstration empowers the students to take charge of their learning.



Table 7 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Led-Discussion

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I learn more when I listen to my peers.	3.55	0.74	Strongly Agree
I can do more about the activities when I listen to my peers inside the class.	3.23	0.61	Agree
I spent my time well listening to my peers who led the discussion rather than being part of the discourse.	3.50	0.60	Strongly Agree
I understand the lesson well when I listen to my peers in the discussion.	3.45	0.74	Strongly Agree
I feel confident listening to my peers when they lead the discussion.	3.41	0.67	Strongly Agree
	3.43	0.67	VGE
Interpersonal			
I can encourage myself and others to learn and engage in discussing the topic when I talk to others.	3.42	0.76	Strongly Agree
I am willing to discuss some clarification and questions with my peers.	3.23	0.65	Agree
I can easily interpret my understanding through the help of my peers when I participate to them.	3.42	0.64	Strongly Agree
I like to work in a positive environment when I engage myself in the communication during the peer led- discussion.	3.62	0.57	Strongly Agree
I learn to work in teams and gain self-confidence in peer-led discussions.	3.54	0.51	Strongly Agree
	3.45	0.64	VGE
Verbal			
I can assess my learning and understanding by discussing the topic and concepts.	3.21	0.71	Agree
I learn to work in a team and communicate effectively.	3.37	0.83	Strongly Agree
I am open and willing to ask questions about the topic with other students.	3.26	0.81	Strongly Agree
I learn through talking about concepts with peers.	3.05	0.85	Agree
I feel more comfortable communicating about the topic with peers even if I commit mistakes.	3.11	0.81	Agree
	3.20	0.79	GE
Visual			
I prefer to see information on the board and supplemented by visual aids discussed by other students.	3.41	0.67	Strongly Agree
I think the best way to remember the lesson is through discussion with my classmates, provided by pictures or photos.	3.14	0.56	Agree
I prefer to explain the lesson to my classmates by using posters, models, or graphs in peer discussions.	3.41	0.67	Strongly Agree
I can easily understand and follow the process of a calculation when my peer uses visual aids.	3.14	0.47	Agree
I prefer looking at the examples that are written than listening to the explanation.	3.14	0.64	Agree
	3.25	0.61	VGE
Weighted Mean		3.32	
SD		0.68	
Verbal Interpretation			<i>Very Great Extent</i>

Table 7 illustrates the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Peer-led- discussion.

Auditory learners tend to believe they learn through listening to the lesson being led by their peers (M=3.55, SD=0.74). Furthermore, learner tends to do the activities easily when their peers lead them (M=3.23, SD=0.61).

The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the discussion of auditory learning styles attained a weighted mean of 3.43 and a standard deviation of 0.67 and was a great extent as viewed by the respondents. This means the learner listens and does the activities when their peers enhance learning and discussion.

Interpersonal learners tend to believe in working in a positive environment when communicating with the peer discussion (M=3.62, SD=0.57). Furthermore, they tend to confidently ask and clarify questions to their peers, leading them (M=3.23, SD=0.65). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' interpersonal learning styles peer led- discussion attained a weighted mean of 3.45 and standard deviation of 0.64 and was a very great extent as viewed by the respondents. This means the learners engaged themselves in the leading discussion with their peers without hesitation.

Verbal learners tend to believe they can communicate effectively as a team during the peer discussion (M=3.37, SD=0.83) Furthermore, learners learn the concepts through interaction with their peers (M=3.05, SD=0.85). The level of



using peer assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles peer-discussion attained a weighted mean of 3.20 and standard deviation of 0.79 and was a great extent as viewed by the respondents. This means the learners are more communicative when their peers lead the discussion and activities tasks.

Visual learners tend to believe they prefer to see the information through visual aids like posters and models presented by their peers (M=3.41, SD=0.67). Furthermore, it tends to understand the discussion and recall the flow of the process using other supplementary aids (M=3.14, SD=0.47). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the student's visual learning styles peer-led- discussion attained a weighted mean of 3.25 and standard deviation of 0.61 and was a great extent as viewed by the respondents. This means the learners must prefer to learn quickly when visual aids and other supported materials provide it.

The level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Peer-led- discussion attained a weighted mean score of 3.32 and a standard deviation of 0.68 and was Very Great Extent among the respondents. This means that learners build their communication skills and harmonious team relationships with their peers in various learning styles.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Tutoring

Table 8 illustrates below the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Peer tutoring

Auditory learners tend to believe that they are comfortable listening to their peers during discussions (M=3.32, SD=0.65). Furthermore, learners listen to their class achievers during the session (M=3.09, SD=0.75). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the auditory learning styles of peer tutoring attained a weighted mean of 3.22 and standard deviation of 0.71 and was a great extent as viewed by the respondents. This means the learners actively listen to their peer teaching and guidance during class discussions.

Interpersonal learners tend to feel comfortable cooperating with their peer tutor during the discussion; thus, they believe they have more Ideas to share when they are with their peers (M=3.42, SD=0.70) Furthermore, learner tends to understand the lesson by interfering with their peers in the class tutorials (M= 3.23, SD= 0.51). The level of using peer assisted learning strategies in teaching mensuration and calculation based on the interpersonal learning styles of peer tutoring attained a weighted mean of 3.32 and a standard deviation of 0.64 and was a great extent as viewed by the respondents. This means the learners are more willing to listen to their peers during the tutorials, which creates a good relationship with each other.

Table 8 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation Based on the Students' Learning Styles Peer tutoring

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I can understand the lesson well when I listen to the explanation of my classmate who had a high score on our quiz about the topic.	3.27	0.77	Strongly Agree
I prefer listening to my classmates who are achievers in the class.	3.09	0.75	Agree
Listening to my peers who can do well in the classroom creates positive learning for the other students.	3.27	0.70	Strongly Agree
I am more comfortable listening to my peers in the lesson discussion.	3.32	0.65	Strongly Agree
I can easily distinguish the errors I committed in the lesson when I listen to my peers who are teaching the lessons.	3.14	0.71	Agree
	3.22	0.71	GE
Interpersonal			
I can ask for some clarification by means of interacting comfortably with my peers who teach the topic.	3.23	0.51	Agree
I feel positive when I ask for an additional explanation from my classmates who teach the lesson.	3.38	0.64	Strongly Agree
I can easily interact with my peers with high scores in the quiz about the lesson makes learning more meaningful.	3.31	0.62	Strongly Agree
I have understood the lesson well when I collaborate with my peer tutor.	3.23	0.71	Agree
I feel comfortable in cooperating with my peer tutor because I think they have more ideas about the topic.	3.42	0.70	Strongly Agree
	3.32	0.64	VGE
Verbal			
I can grasp the needed learning when I talk about the topic with my peer tutor.	3.32	0.58	Strongly Agree
I more comfortable when my peers teach and guide me in a particular activity.	3.42	0.84	Strongly Agree
I can easily get the main idea of the topic when communication is presented in the peer tutoring approach.	3.16	0.69	Agree
I can add more information to have a deeper understanding of the topic when my	3.21	0.79	Agree



peer assists it.			
I can learn in a positive environment when I exchange my ideas with my peer tutor.	2.95	0.78	Agree
	3.21	0.74	GE
Visual			
I can easily get the idea in the peer tutoring approach when visual aids supplement it.	3.27	0.55	Strongly Agree
I tend to focus more on how the peer tutor elaborated on the topic using pictures or written texts.	3.23	0.53	Agree
I pay more attention when listening to the peer tutor's discussion with pictures or visual aids.	3.23	0.61	Agree
I can focus on the lesson when it is explained verbally using visual aids with the help of my peer tutor.	3.27	0.46	Strongly Agree
I can learn more in the peer tutoring approach when I am guided with photos and videos.	3.14	0.56	Agree
	3.23	0.54	GE
Weighted Mean		3.25	
SD		0.66	
Verbal Interpretation			Very Great Extent

Verbal learners tend to believe that when their peers teach them well and explain the guided materials in particular activities, they become more confident in finishing the task (M=3.42, SD=0.84). Furthermore, learners tend to learn in a positive environment by exchanging ideas with their peer tutor (M=2.95, SD=0.78). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles of peer tutoring attained a weighted mean of 3.21 and a standard deviation of 0.74, which was a great extent, as viewed by the respondents. This means that the learners participate more in peer teaching and interactive learning and can confidently express their ideas to others.

Visual learners tend to believe they easily understand the lesson when the peer tutor presents various supporting materials that can enhance their understanding (M=3.27, SD=0.55). Furthermore, learners tend to learn in peer tutoring when it is provided and guided by digital presentation aids (M=3.14, SD=0.56). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the visual learning styles of peer tutoring attained a weighted mean of 3.23 and a standard deviation of 0.54, and this was a great extent. This means learners learn through peer tutoring with the help of their companion in learning. Thus, learners learn and understand the topic much easier, supported by supplementary learning materials that can enhance their academic skills.

The level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Peer tutoring attained a weighted mean score of 3.25 and a standard deviation of 0.66 and was Very Great Extent among the respondents. This means that the learners view their peers' help and guidance as improving their academic and social skills with their tutor, producing positive experiences and good outcomes. Peer tutoring positively affects students' learning, as the learners are more comfortable participating in the learning process and in the activities given by the teacher. So that the students engage more in the activities and motivate to participate and collaborate in the group of students.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Think Pair- share

Table 9 illustrates below the level of using Peer Assisted Learning Strategies in teaching mensuration and calculation in terms of Think pair- share

Auditory learners tend to listen attentively to their partners when they share their ideas in the activities (M=3.45, SD=0.74). Furthermore, learners tend to be quite comfortable understanding their partner's shared ideas about the topic (M=3.14, SD=0.64). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' auditory learning styles think pair-share attained a weighted mean of 3.31 and standard deviation of 0.67 and was a very great extent as viewed by the respondents. This means learners prefer to listen and think together as a group and with their partners and have connections during the activities that make them feel comfortable during the task.

Interpersonal learners tend to collaborate with their partners during the task (M=3.54, SD=0.51). Furthermore, learners tend to do tasks with the help of others (M=3.31, SD=0.74). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' interpersonal learning styles think pair-share attained a weighted mean of 3.42 and standard deviation of 0.62 and was a very great extent as viewed by the respondents. This means learners prefer to have partners during the activities that can help them share and get some ideas while they are together.

Verbal learners tend to learn better in the pair-share discussion; thus, they can easily state their concerns while doing the activity with their partner (M=3.42, SD=0.51). Furthermore, learners believe that interaction with their partners during the discussion is more effective than listening (M=3.26, SD=0.81).



Table 9 Level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Think Pair- Share

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I learn when I hear my pair sharing his/her ideas about the topic.	3.45	0.74	Strongly Agree
I enjoy listening to my partner to get more ideas.	3.32	0.65	Strongly Agree
Listening to my partner during an activity makes me more comfortable about the topic.	3.14	0.64	Agree
I prefer to listen to others than speak verbally.	3.23	0.75	Agree
I listen carefully to what my partner tells me to do.	3.41	0.59	Strongly Agree
	3.31	0.67	VGE
Interpersonal			
I prefer to do the task with the help of others.	3.31	0.74	Strongly Agree
Interacting with my partner about the topic resolves confusion on the topic.	3.46	0.65	Strongly Agree
I feel enthusiastic when I work with my partner on the topic.	3.46	0.65	Strongly Agree
I can collaborate with my partner during the activity.	3.54	0.51	Strongly Agree
I feel have better outcomes when I work in pair.	3.35	0.56	Strongly Agree
	3.42	0.62	VGE
Verbal			
I learn the lesson better when I do discussion with my partner.	3.32	0.82	Strongly Agree
I can confidently share the ideas when I explained it with my partner during the activity.	3.32	0.75	Strongly Agree
I prefer to state my concern in doing the activity with my partner about the topic.	3.42	0.51	Strongly Agree
I learn more when I talk to my partner than when I listen to his ideas about the topic.	3.26	0.81	Strongly Agree
I can understand my partner's ideas when they are discussed verbally during the activity.	3.32	0.67	Strongly Agree
	3.33	0.71	VGE
Visual			
I learned better by reading what my partner wrote in the activity paper during the think-pair share.	3.18	0.50	Agree
I remember things when my partner explains his ideas using visual aids.	3.18	0.39	Agree
I learn better when reading the topic than listening the discussion of my partner.	3.05	0.58	Agree
I learn easily when the information is easy to read and understand with the help of my partner.	3.36	0.49	Strongly Agree
If presented with a visual aid, I take a short time to analyze the information in the think-pair share.	3.05	0.58	Agree
	3.16	0.52	GE
Weighted Mean		3.31	
SD		0.63	
Verbal Interpretation		Very Great Exten	

The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles think pair-share attained a weighted mean of 3.33 and a standard deviation of 0.71, which was a great extent. This means learners enjoy interacting with their partners while performing the activities.

Visual learners tend to believe that they learn the information presented with their partner when the materials are readable and precise to the lesson's learning objectives (M=3.36, SD=0.49). Furthermore, learners tend to think this shortens the time needed to analyze the material when the visual aids are presented during the discussion (M=3.05, SD=0.58). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the visual learning styles think pair-share attained a weighted mean of 3.16 and standard deviation of 0.52, which was a great extent, as viewed by the

respondents. This means that learners learn the information presented like visual aids with the help of their partners.

The level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Think Pair- Share attained a weighted mean score of 3.31 and a standard deviation of 0.63 and was Very Great Extent among the respondents. This means the learners improve their ability to recall information and learn from their partner. It also arouses the learners' interest in interacting and working with one another.

Level of Student Technical Skills

This study described comprehension, critical thinking, problem solving, and spatial visualization, which was determined by the weighted mean and standard deviation.



Table 10 Level of Students' Technical Skills Before and After Using Peer Assisted Learning Strategies and Group According to their Learning Styles in terms of Comprehension

Student Learning Styles	Before			After			
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation	
Auditory	1.48	1.08	Did not meet Expectations	3.78	0.67	Very Satisfactory	
Interpersonal	1.46	1.17	Did not meet Expectations	4.04	0.53	Very Satisfactory	
Verbal	1.37	0.83	Did not meet the expectation	4.16	0.60	Very Satisfactory	
Visual	1.59	1.14	Did not meet Expectations	3.54	0.60	Very Satisfactory	
Weighted Mean		1.48			3.88		
SD		1.06			0.60		
Verbal Interpretation		<i>Did not meet Expectations</i>				<i>Very Satisfactory</i>	

Table 10 presents the level of students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of Comprehension.

For students' auditory learning style, before it attained a weighted mean and standard deviation of (M= 1.48, SD= 1.08), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of comprehension, I attained a weighted mean and standard deviation of (M= 3.78, SD= 0.67) which was very satisfactory. This means the learners improved their technical comprehension skills before and after utilizing peer-assisted learning strategies according to their learning styles.

For students' interpersonal learning style, before it attained a weighted mean standard deviation of (M= 1.46, SD= 1.17), it did not meet expectations. Furthermore, after using the peer-assisted learning strategies in terms of comprehension, a weighted mean and standard deviation of (M= 4.04, SD= 0.53) was attained, which was very satisfactory. This means the learners improved their technical comprehension skills before and after utilizing peer-assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 1.37, SD= 0.83), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of comprehension, I attained a weighted mean and standard deviation of (M= 4.16, SD= 0.60), which was very satisfactory. This means that the learners improved their technical skills in comprehension before and after the utilization of peer-assisted learning strategies according to their learning styles.

For students' visual learning styles, before it attained a weighted mean and standard deviation of (M= 1.59, SD=1.14) it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of comprehension, I attained a weighted mean and standard deviation of (M= 3.54, SD= 0.60), which was very satisfactory. This means the learners improved their technical comprehension skills before and after utilizing peer-assisted learning strategies according to their learning styles.

The students' technical skills in terms of comprehension before using the peer-assisted learning strategies visual learning style got the highest weighted mean and standard deviation of (M= 1.59, SD= 1.14) while the verbal learning style got the lowest weighted mean and standard deviation of (M= 1.37, SD= 0.83) and was did not meet the expectation. Furthermore, after using the peer-assisted learning strategies, the verbal learning style got the highest weighted mean of (M= 4.16, SD= 0.60), while the visual learning style got the lowest weighted mean and standard deviation of (M= 3.54, SD= 0.60) and was very satisfactory.

The level of student technical skills before and after using peer-assisted learning strategies and groups according to their learning styles in terms of comprehension before it attained a mean of 1.48 and standard deviation of 1.06 and did not meet Expectations. Furthermore, after the weighted mean of 3.88 and standard deviation of 0.60, it was Very Satisfactory. This means that the student's technical skills in terms of comprehension improved before and after using the peer-assisted learning strategies according to their learning styles. It effectively supports learner development and also shows a positive impact on the learner's skills.

Table 11 Level of Students' Technical Skills Before and After Using Peer Assisted Learning Strategies and Group According to their Learning Style in terms of Critical thinking

Student Learning Styles	Before			After		
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation
Auditory	1.56	1.08	Did not meet Expectations	3.61	0.72	Very Satisfactory
Interpersonal	1.50	1.17	Did not meet Expectations	4.11	0.82	Very Satisfactory
Verbal	1.47	1.07	Did not meet the	3.63	0.83	Very Satisfactory



Visual	1.54	0.96	expectation Did not meet Expectations	3.45	0.86	Very Satisfactory
Weighted Mean		1.52				3.70
SD		1.07				0.81
Verbal Interpretation		<i>Did not meet Expectations</i>				<i>Very Satisfactory</i>

Table 11 presents the level of students' technical skills before and after using peer assisted learning strategies and groups according to their learning style in terms of Critical thinking.

For students' auditory learning style, before it attained a weighted mean of and standard deviation of (M= 1.56, SD= 1.08), it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of critical thinking, attained a weighted mean and standard deviation of (M= 3.61, SD= 0.72) and was very satisfactory. This means that the learners improved their technical skills in critical thinking before and after utilizing peer assisted learning strategies according to their learning styles.

For students' interpersonal learning style, before it attained a weighted mean standard deviation of (M= 1.50, SD= 1.17), it did not meet expectations. Furthermore, after using the peer-assisted learning strategies in terms of critical thinking, a weighted mean and standard deviation of (M= 4.11, SD= 0.82) was attained, which was very satisfactory. This means that the learners improved their technical skills in critical thinking before and after utilizing peer-assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 1.47, SD= 1.07), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of critical thinking, attained a weighted mean and standard deviation of (M= 3.63, SD= 0.83) and was very satisfactory. This means that the learners improved their technical skills in critical thinking before and after the utilization of peer assisted learning strategies according to their learning styles.

For students' visual learning styles, before it attained a weighted mean of and standard deviation of (M= 1.54, SD= 0.46), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of critical thinking, attained a weighted mean and standard deviation of (M= 3.45, SD= 0.86) and was very satisfactory. This means that the learners improved their technical skills and critical thinking before and after the utilization of peer assisted learning strategies

according to their learning styles.

Regarding the students' technical skills in terms of critical thinking before using the peer-assisted learning strategies, the auditory learning style got the highest weighted mean and standard deviation of (M= 1.56, SD= 1.08) while the verbal learning style got the lowest weighted mean and standard deviation of (M= 1.47, SD= 1.07) and was did not meet expectation. Furthermore, after using the peer assisted learning strategies, the interpersonal learning style got the highest weighted mean of (M= 4.11, SD= 0.82), while the visual learning style got the lowest weighted mean and standard deviation of (M= 3.45, SD= 0.86) and was very satisfactory.

The level of student technical skills before and after using peer-assisted learning strategies and groups according to their learning styles in terms of critical thinking before it attained a weighted mean of 1.57 and standard deviation of 1.07 and Did not meet Expectations. Furthermore, after the weighted mean of 3.70 and standard deviation of 0.81, it was Very Satisfactory. This means that the students' technical skills in terms of critical thinking improved before and after using the peer-assisted learning strategies according to their learning styles. That results in the enhancement of the learners' thinking abilities and creative minds. Additionally, it helps learners in decision-making and solving complex math problems.

Level of Students' Technical Skills before and after Using Peer-Assisted Learning Strategies and Group According to their Learning Style in terms of Problem-Solving

Table 12 presents below the level of students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of Problem solving. For students auditory learning style, before it attained a weighted mean and standard deviation of (M= 1.30, SD= 1.06) it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of problem solving, attained a weighted mean and standard deviation of (M= 3.35, SD= 0.77) and was very satisfactory. This means that the learners improved their technical problem-solving skills before and after using peer assisted learning strategies according to their learning styles.

Table 12 Level of Students' Technical Skills Before and After Using Peer-Assisted Learning Strategies and Group According to Their Learning Style in terms of Problem-Solving

Student Learning Styles	Before			After		
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation
Auditory	1.30	1.06	Did not meet Expectations	3.35	0.77	Very Satisfactory
Interpersonal	1.42	0.81	Did not meet Expectations	3.85	0.67	Very Satisfactory



Verbal	0.79	0.85	Did not meet the expectation	3.63	0.50	Very Satisfactory
Visual	1.23	0.87	Did not meet Expectations	3.27	0.63	Very Satisfactory
Weighted Mean		1.18			3.53	
SD		0.90			0.64	
Verbal Interpretation			Did not meet Expectations			Very Satisfactory

For students' interpersonal learning style, before it attained a weighted mean and standard deviation of (M= 1.42, SD= 0.81), it did not meet expectations. Furthermore, after using the peer-assisted learning strategies in terms of problem-solving attained a weighted mean and standard deviation of (M= 3.85, SD= 0.67) and was very satisfactory. This means the learners improved their technical problem-solving skills before and after using peer assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 0.75, SD= 0.85), it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of problem solving, I attained a weighted mean and standard deviation of (M= 3.63, SD= 0.50), which was very satisfactory. This means that the learners improved their technical problem-solving skills from before and after using peer assisted learning strategies according to their learning styles.

For students visual learning styles, before it attained a weighted mean and standard deviation of (M= 1.23, SD= 0.87), it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of problem-solving attained a weighted mean and standard deviation of (M= 3.27, SD= 0.63) and was very satisfactory. This means that the learners improved their technical problem-solving skills from before and after using peer assisted learning strategies according to their learning styles.

Regarding the students' technical skills in terms of problem

solving before using the peer assisted learning strategies, the interpersonal learning style got the highest weighted mean and standard deviation of (M= 1.42, SD= 0.81) while the verbal learning style got the lowest weighted mean and standard deviation of (M= 0.79, SD= 0.85) and was did not meet the expectation. Furthermore, after using the peer assisted learning strategies, the interpersonal learning style got the highest weighted mean of (M= 3.85, SD= 0.67), while the visual learning style got the lowest weighted mean and standard deviation of (M= 3.27, SD= 0.63) and was very satisfactory.

The level of students' technical skills before and after using peer assisted learning strategies and groups according to their learning styles in problem-solving before the attained weighted mean of 1.18 and standard deviation of 0.90 did not meet Expectations. Furthermore, after the attained weighted mean of 3.53 and standard deviation of 0.64, it was Very Satisfactory. This means that the students' technical skills in terms of problem solving improved before and after using the peer assisted learning strategies according to their learning styles. It showed that the students developed their problem solving abilities, which led to their enhancement in solving complex problems and analyzing and interpreting data.

Level of Students' Technical Skills Before and After Using Peer-Assisted Learning Strategies and Group According to their Learning Styles in terms of Spatial Visualization

Table 13 presents below the level of students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of Spatial visualization.

Table 13 Level of Student Technical Skills before and after Using Peer Assisted Learning Strategies and Group According to their Learning Style in terms of Spatial visualization

Student Learning Styles	Before			After		
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation
Auditory	0.96	0.88	Did not meet Expectations	3.39	0.58	Very Satisfactory
Interpersonal	0.85	0.67	Did not meet Expectations	3.65	0.63	Very Satisfactory
Verbal	1.21	0.71	Did not meet the expectation	3.32	0.67	Very Satisfactory
Visual	1.04	0.95	Did not meet Expectations	3.73	0.88	Very Satisfactory
Weighted Mean		1.01			3.52	
SD		0.80			0.69	
Verbal Interpretation			Did not meet Expectations			Very Satisfactory

For students' auditory learning style, before it attained a weighted mean and standard deviation of (M= 0.96, SD= 0.88),

it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of spatial visualization,



attained a weighted mean and standard deviation of (M= 3.39, SD= 0.58) and was very satisfactory. This means that the learners improved their technical spatial visualization skills before and after utilizing peer assisted learning strategies according to their learning styles.

For students' interpersonal learning style, before it attained a weighted mean and standard deviation of (M= 0.85, SD= 0.67), it did not meet expectations. Furthermore, after using the peer assisted learning strategies in terms of spatial visualization, attained a weighted mean and standard deviation of (M= 3.65, SD= 0.63) and was very satisfactory. This means that the learners improved their technical skills in spatial visualization before and after the utilization of peer assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 1.21, SD= 0.71), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of spatial visualization, attained a weighted mean and standard deviation of (M= 3.32, SD= 0.67) and was very satisfactory. This means that the learners improved their technical skills in spatial visualization before and after using peer assisted learning strategies according to their learning styles.

For students' visual learning styles, they did not meet expectations before they attained a weighted mean standard deviation of (M= 1.04, SD= 0.95). Furthermore, after using peer assisted learning strategies in terms of spatial visualization, attained a weighted mean and standard deviation of (M= 3.73, SD= 0.88) and was very satisfactory. This means that the learners improved their technical skills in spatial

visualization from before and after using peer assisted learning strategies according to their learning styles.

Regarding the students' technical skills in terms of spatial visualization before using the peer assisted learning strategies the verbal learning style got the highest weighted mean and standard deviation of (M= 1.21, SD= 0.71) while the interpersonal learning style got the lowest weighted mean and standard deviation of (M= 0.85, SD= 0.67) and was did not meet the expectation. Furthermore, after using the peer assisted learning strategies, the visual learning style got the highest weighted mean of (M= 3.73, SD= 0.88), while the verbal learning style got the lowest weighted mean and standard deviation of (M= 3.32, SD= 0.67) and was very satisfactory. The level of students' technical skills before and after using peer assisted learning strategies and groups according to their learning styles in terms of spatial visualization before the attained weighted mean of 1.01 and standard deviation of 0.80 and Did not meet Expectations. Furthermore, after the attained weighted mean of 3.52 and standard deviation of 0.69, and was Very Satisfactory. This means that the students' technical skills in terms of spatial visualization improved before and after using the peer assisted learning strategies according to their learning styles. It enhances the learner's spatial abilities in interpreting and analyzing data using visual analysis of figures, diagrams, and plans.

Significant Difference between the Students' Technical Skills Using Peer-Assisted Learning Strategies as Group According to Their Learning Styles

The computed p- p-values were compared to the level of significance at 0.05 to determine the significant difference in student technical skills using peer assisted learning strategies.

Table 14 Test of Difference Between the Students' Technical Skills Using Peer-Assisted Learning Strategies as a Group According to Their Learning Styles

Student Technical Skills	Before		After		Mean Difference	T value	P value
	Mn	SD	Mn	SD			
Comprehension							
Auditory	1.48	1.08	3.78	0.67	2.30	-8.78	<0.001
Interpersonal	1.46	1.17	4.04	0.53	2.58	-10.34	<0.001
Verbal	1.37	0.83	4.16	0.60	2.78	-11.79	<0.006
Visual	1.59	1.14	3.54	0.60	1.95	-7.11	<0.005
	1.48	1.06	3.88	0.60	2.40		
Critical thinking							
Auditory	1.56	1.08	3.61	0.72	2.04	-8.01	<0.005
Interpersonal	1.50	1.17	4.11	0.82	2.61	-10.27	<0.001
Verbal	1.47	1.07	3.63	0.83	2.16	-7.22	<0.001
Visual	1.54	0.96	3.45	0.86	1.91	-7.27	<0.003
	1.52	1.07	3.70	0.81	2.18		
Problem-solving							
Auditory	1.30	1.06	3.35	0.77	2.04	-7.77	<0.009
Interpersonal	1.42	0.81	3.85	0.67	2.42	-13.7	<0.004
Verbal	0.79	0.85	3.63	0.50	2.84	-12.21	<0.003



Visual	1.23	0.87	3.27	0.63	2.04	-8.8	<0.001
	1.18	0.90	3.53	0.64	2.33		
Spatial visualization							
Auditory	0.96	0.88	3.39	0.58	2.43	-10.06	<0.001
Interpersonal	0.85	0.67	3.65	0.63	2.81	-20.63	<0.003
Verbal	1.21	0.71	3.32	0.67	2.10	-8.75	<0.006
Visual	1.04	0.95	3.73	0.88	2.68	-8.81	<0.001
	1.01	0.80	3.52	0.69	2.51		

Legend: *Significant at 0.05

Revealed in Table 14 is the test of difference between the students' technical skills in terms of comprehension, critical thinking, problem solving, and spatial visualization is significantly difference before and after using peer-assisted learning strategies as a group according to their learning styles in terms of auditory, interpersonal, verbal and visual, as evidenced that were the p value (0.05) are above significance. This implies that the learners performed better after using the peer assisted learning strategies as group according to their learning styles. Their level of student technical skills has significantly improved from low to very high. The result of this study indicate that the students enhance their technical skills

when there is various peer assisted learning strategies to be used in teaching mensuration and calculation. Additionally, it also potentially improves the academic performance of the students.

Significant Effect of Peer-Assisted Learning Strategies the Students' Technical Skills as a Group According to their Learning Styles

The computed p- p-values were compared to the significance level at 0.05 to determine the significant effect of peer assisted learning strategies on the students' technical skills according to their learning styles.

Table 15 Regression Analysis on the Level of Utilizing Peer-Assisted Learning Strategies to the Students' Technical Skills as a Group According to Their Learning Styles

Comprehension	B	SE	β	t	p
Constant	3.684	0.904		4.075*	0.000
Jigsaw Method		0.245	0.09	0.368	0.713
Peer demonstration		0.223	0.125	0.561	0.576
Peer-led- discussion		0.233	-0.032	-0.138	0.89
Peer tutoring		0.193	0.12	0.625	0.533
Think Pair- Share		0.215	-0.238	-1.11	0.27
R-squared			.027		
Adjusted R-squared			-.031		
Standard Error of the Estimate		.643			
F(5, 83)				.469	.799
Critical thinking	B	SE	β	t	p
Constant	4.236	1.155		3.667*	0.000
Jigsaw Method		0.313	0.692	2.214*	0.03
Peer demonstration		0.285	0.04	0.14	0.889
Peer led- discussion		0.297	-0.421	-1.417	0.16
Peer tutoring		0.246	-0.07	-0.285	0.776
Think Pair- Share		0.274	-0.379	-1.382	0.171
R-squared			.087		
Adjusted R-squared			.033		
Standard Error of the Estimate		.821			
F(5, 83)				1.605	.168
Problem Solving	B	SE	β	t	p
Constant	4.675	0.946		4.944*	0.000
Jigsaw Method		0.256	0.399	1.561	0.122
Peer demonstration		0.233	-0.4	-1.712	0.091
Peer-led- discussion		0.243	-0.034	-0.141	0.888
Peer tutoring		0.202	0.134	0.666	0.507
Think Pair- Share		0.225	-0.441	-1.963	0.053
R-squared			.105		



Adjusted R-squared				.051	
Standard Error of the Estimate				.672	
F(5, 83)				1.961	.093
Spatial visualization	B	SE	β	t	p
Constant	2.925	1		2.925*	0.004
<i>Jigsaw Method</i>		0.271	-0.067	-0.246	0.806
<i>Peer demonstration</i>		0.247	0.077	0.314	0.755
<i>Peer led- discussion</i>		0.257	-0.333	-1.296	0.199
<i>Peer tutoring</i>		0.213	0.314	1.472	0.145
<i>Think Pair- Share</i>		0.238	0.2	0.844	0.401
R-squared				.044	
Adjusted R-squared				-.013	
Standard Error of the Estimate				.711	
F(5, 83)				1.011	.404

*p < 0.05

Table 15 below presents the results of a multiple regression analysis examining the effect of peer assisted learning strategies in terms of the jigsaw method, peer demonstration, peer led-discussion, peer tutoring, and think pair-share to the student technical skills in terms of comprehension, critical thinking, problem-solving, and spatial visualization as group according to their learning styles.

This implies that using peer assisted learning strategies in terms of the jigsaw method to the students' technical skills in critical thinking only showed a significant effect, as evidenced by the obtained p- value (0.030) which was lower than (0.05) the significance level. On the other hand, students' technical skills in terms of comprehension, problem solving, and spatial visualization have no significant effect. This was supported by the attained p- value (0.713, 0.122, 0.806) above (0.05) the significance level. This further implies that the jigsaw method may mainly not affect their technical skills as group according to their learning styles.

Similarly, peer assisted learning strategies in terms of peer demonstration exhibited no significant effect on comprehension; the gained p-value (0.576) in terms of critical thinking (0.889), in terms of problem-solving (0.091), and (0.755) in spatial visualization were all beyond (0.05) level of significance. This explains further that the peer assisted learning strategies will not define the student technical skills.

On the same note, peer-assisted learning strategies in terms of peer led- discussion exhibited no significant effect on comprehension, the gained p- value (0.890) in critical thinking (0.160), in problem solving (0.091), and (0.199) in spatial visualization were all beyond (0.05) level of significance. This explains further that the PALS will not affect the student' technical skills.

Furthermore, peer assisted learning strategies in terms of peer tutoring exhibited no significant effect on comprehension the gained p- value (0.533) in terms of critical thinking (0.776), in problem-solving (0.507), and (0.145) in terms of spatial visualization were all beyond (0.05) level of significance. This further explains that the peer assisted learning strategies are

insufficient to show the students' technical skills in learning mensuration and calculation.

Lastly, peer assisted learning strategies in terms of think pair-share exhibited no significant effect on comprehension; the gained p- value (0.270) in terms of critical thinking (0.171), in terms of problem-solving (0.053), and (0.401) in terms of spatial visualization were all beyond (0.05) level of significance. This explains further that the peer assisted learning strategies will not affect the student technical skills.

Based on the findings above, it can be deduced that using peer assisted learning strategies will not affect the student technical skills. However, the functionalities of this can be perceived in the students' learning.

4. CONCLUSION AND RECOMMENDATIONS

Given the findings of the study, the researcher concluded the following:

Based on the findings of the researcher, it was concluded in the result of the students' technical skills in terms of comprehension, critical thinking, problem-solving, and spatial visualization showed significant differences before and after using peer assisted learning strategies as a group according to their learning style. Students enhance their technical skills when various peer-assisted learning strategies are used to teach mensuration and calculation. Therefore, the null hypothesis was rejected.

On the other hand, it was concluded in the result that the peer-assisted learning strategies in terms of the jigsaw method only showed a significant effect on the technical skills in terms of critical thinking as a group according to their learning styles, while other indicators do not show the significant effect to the student technical skills. This implies that peer-assisted learning strategies do not affect the students' technical skills according to their learning styles. Therefore, the null hypothesis is accepted.

Based on the conclusion driven, the researcher formulated the following recommendations.



1. The researcher recommended the utilization of Peer-Assisted Learning Strategies as an alternative strategy to teach mensuration and calculation; it is imperative to teachers teaching the subject as it motivates and increases the students' technical skills.
2. The researcher recommended that Peer-Assisted Learning Strategy be used to teach another subject to observe if the technique brings similar outcomes.
3. The researcher recommended that teachers incorporate the aligned students' learning styles in teaching to develop the essential skills and accommodate the students' diverse learning preferences.

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STANDARDIZED TRAINING PROGRAM ON ATHLETES WELL-BEING AND PERFORMANCE IN POTENTIAL ATHLETES IDENTIFICATION

Jhon Robert De Mesa

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The study conducted at Calumpang National High School set out to explore the relationship between standardized training programs and athletes' well-being, with a particular focus on Grade 7 students. This investigation utilized descriptive statistics to analyze aspects such as Physical Literacy, Physical Fitness Testing (PFT), Health and Wellness, and their impact on students' overall well-being, which encompasses areas like Social Connection, Lifestyle Habits, Time Management, Energy Level, as well as Resilience and Coping Skills. The research identified that while the training programs have been effective in fostering physical literacy, fitness, and wellness, the relationship between these programs and practical athletic performance remains inconclusive, suggesting a potential need for program refinement.

Findings from the study reveal that while the training program succeeds in promoting physical health, it also significantly benefits athletes' social connections and overall life skills, indicating the multifaceted value of such initiatives. Despite high levels of social connection and good lifestyle habits among the athletes, areas such as conflict management and health habit communication were identified as potential avenues for improvement. Additionally, although the program fosters resilience and positive coping strategies, aligning the program more closely with practical performance outcomes could bolster its effectiveness.

Regarding athletic performance, particularly in practical tasks, the analysis pointed to a predominant Intermediate skill level amongst the athletes. This outcome underscores the necessity for targeted training aimed at elevating the athletes' performance levels. However, the research did not uncover a significant correlation between the standardized training programs in their current state and enhancements in practical task performance, suggesting that these programs might benefit from adjustments to better support skill advancement.

Despite the absence of a significant link between the training programs and practical performance improvements, the study did find a positive correlation between the programs and aspects of the athletes' well-being. This suggests that while adjustments may be needed to foster skill development more effectively, the benefits to athletes' well-being are tangible, paving the way for a more comprehensive approach to training that addresses both physical and psychological aspects of athlete development.

Based on these findings, several recommendations were proposed to enhance the impact of standardized training programs. These include the introduction of performance-focused training modules, continuous emphasis on well-being dimensions with high satisfaction ratings, and the integration of specific educational components to bolster athletes' well-being and performance under stress. Further, establishing regular feedback and review mechanisms was suggested to ensure continual program improvement and alignment with athlete needs, building a stronger foundation for both immediate and long-term athlete development.

KEYWORDS: standardized training; programs; athletes' well-being

1. INTRODUCTION

Sports talent identification was once thought to be a complex process that was essential to developing young athletes' potential and influencing the direction of competitive sports. Identifying and cultivating athletic abilities early on could not only benefit individual athletes but also contribute to the overall advancement of sports on a broader scale. In the context of educational institutions, where diverse talents converged, two primary approaches stood out in identifying potential athletes.

This research sought to enhance understanding of sports talent identification by comparing the efficacy of a standardized training program on athletes' well-being and performance in potential athletes' identification. It aimed to elucidate the advantages and disadvantages of this method, their influence on athlete development, and their broader implications for cultivating a vibrant sports culture in educational communities.

Through detailed data collection and analysis, the study intended to uncover the complementary strengths of both approaches, advocating for their integrated application to achieve a comprehensive and effective talent identification strategy. The goal was to equip educators, coaches, and policymakers with insights that enabled the creation of more customized and impactful talent identification programs, ultimately fostering the discovery and development of hidden athletic talent and positively affecting the sports community.

The researcher wanted to determine valuable insights for educators, coaches, and policymakers, guiding them in designing more effective and tailored talent identification programs. Ultimately, this research endeavored to facilitate the discovery and nurturing of latent athletic potential, creating a positive and transformative impact on the lives of young athletes and the sports community through a standardized



training program on athletes' well-being and performance in potential athletes' identification.

1.1 Statement of the Problem

Specifically, the study sought to answer the following questions:

1. What is the status of utilization of the standardized training program in terms of;
 - 1.1 Physical Literacy;
 - 1.2 Physical Fitness Test (PFT); and
 - 1.3 Health and Wellness?
2. What is the level of Athletes well-being and potential of the Grade 9 students of Calumpang National High School in terms of:
 - 1.4 Social Connection;
 - 1.5 Lifestyle habits;
 - 1.6 Time management;
 - 1.7 , Resilience and coping skills, and
 - 1.8 Energy level
3. What is the level of athlete performance in terms of Practical tasks?
4. Does a standardized training program have a significant relationship to the athlete's well-being?
5. Does the standardized training program have a significant relationship to the athletes' performance?

2. METHODOLOGY

The research employs a descriptive research design, following Colorafi and Evans (2016), emphasizing the description and interpretation of existing phenomena. The objective is to delve into the current state of relationships, individual opinions, ongoing processes, observable effects, and emerging trends. While the focus is predominantly on the present, the study also acknowledges the relevance of past events and influences associated with the conditions under scrutiny. Data for the research is primarily sourced from respondent profiles and perceptions. To ensure the study's reliability, a normative survey questionnaire was employed to collect crucial information from participants systematically.

The researchers utilized the descriptive method to gather data on the relationship between standardized training programs of the athlete's well-being to the potential identification of the

athletes at Calumpang National High School, Nagcarlan sub-office Division of Laguna academic year 2023-2024.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis, and interpretation of data gathered to answer the sub-problem relative to the main problem of this study. This part discusses the findings of the study based on the research questions.

Level of Standardized Training Program

This method of training adheres to a predetermined framework and curriculum and is methodically constructed and consistent. This study sought to evaluate the efficacy and comprehensiveness of the standardized training program. It specifically aimed to assess the program's level in cultivating Physical Literacy, enhancing students' performance in the Physical Fitness Test (PFT), and promoting Health and Wellness. Through this investigation, we endeavored to understand the influence of structured training on young learners and the implications for their overall physical education and health.

The level of the standardized training program was revealed in the following table, showing the statement, mean, standard deviation and verbal interpretation.

Level of the Standardized Training Program in terms of Physical Literacy

Based on the supplied data evaluating the level of the standardized training program in terms of Physical Literacy, the analysis focuses on their reported experiences across various dimensions such as motivation, adaptability, self-assessment, physical literacy, and attitudes towards lifelong physical activity.

The highest mean score, 3.25 and standard Deviation 0.72, indicates that students are most motivated to participate in physical activities or sports, indicating that the program effectively fosters enthusiasm toward engaging in such activities. This aspect of the training program appears to be its strongest feature, signaling a successful encouragement of active participation among students.

Table 1 Level of the Standardized Training Program in terms of Physical Literacy

STATEMENT	MEAN	SD	REMARKS
<i>The students are:</i>			
<i>Motivated to participate in physical activities or sports.</i>	3.25	0.72	<i>Often</i>
<i>Comfortable with adapting to new or unfamiliar physical activities</i>	2.83	0.75	<i>Often</i>
<i>Able to assess and adjust your physical abilities and limitations effectively</i>	3.12	0.79	<i>Often</i>
<i>Feel physically literate and capable in various movement contexts</i>	3.09	0.76	<i>Often</i>
<i>Influenced toward lifelong physical activity.</i>	3.12	0.73	<i>Often</i>
Weighted Mean		3.08	
SD		0.76	
Verbal Interpretation		High	



Conversely, with a mean score, (M=2.83, SD=0.75) relates to students' comfort with adapting to new or unfamiliar physical activities. While still often comfortable, it's a relative area of weakness in the program, indicating potential room for improvement in preparing students to approach and engage with unfamiliar physical challenges confidently.

The overall weighted mean of 3.08 and standard Deviation 0.76, falls within the 'High' category of verbal interpretation. This indicates that, on average, the standardized training program significantly contributes to students' development in physical literacy. The consistent 'Often' remarks across different statements reinforce that students generally perceive positive impacts of the program on their physical readiness and attitudes.

The results imply that the standardized training program successfully cultivates an encouraging environment for student engagement in physical activities, with a notable emphasis on motivating participation. However, the comparatively lower score in adaptability to new activities indicates an area for improvement. Enhancing this aspect could lead to more well-rounded physical literacy, wherein students not only feel motivated but also confidently versatile in facing new physical challenges. This slight adjustment could significantly bolster the program's effectiveness, making it more comprehensive in developing physically literate individuals who are prepared for lifelong physical activity and health. The high overall mean score supports the effectiveness of the program but highlights

the importance of continually assessing and evolving the curriculum to address all facets of physical education holistically.

Level of the Standardized Training Program in terms of Physical Fitness Test (PFT)

The result of the level of the standardized training program in the context of the Physical Fitness Test (PFT). The PFT, a tool used to measure students' physical strengths and abilities, serves as a benchmark for determining the program's effectiveness in enhancing their physical fitness. By closely examining the results of the PFT, we gain valuable insights into how well the students are responding to the training and which areas may require additional focus to ensure a well-rounded development in their physical fitness.

Based on the data presented in Table 2 regarding the effectiveness of the standardized training program as assessed through the Physical Fitness Test (PFT), the interpretation highlights the students' perceived experiences with the program and its influence on their fitness.

The highest mean level, represented by a score of 3.18, signifies that engaging with fitness assessments has positively influenced the students' overall motivation for exercise. This states that the program is particularly successful in enhancing students' enthusiasm and commitment to maintaining and improving their physical health.

Table 2 Level of the Standardized Training Program in terms of Physical Fitness Test

STATEMENT	MEAN	SD	REMARKS
<i>The students were able to:</i>			
<i>Have an expectation regarding improvements in physical fitness when you start the program.</i>	3.02	0.80	<i>Often</i>
<i>Ready with the challenges or difficulties you have encountered during fitness assessments</i>	2.97	0.72	<i>Often</i>
<i>Able to notice any changes in your body composition since starting the program.</i>	2.93	0.74	<i>Often</i>
<i>Envision maintaining and further improving your fitness beyond the program</i>	2.92	0.70	<i>Often</i>
<i>Engage with fitness assessments influenced your overall motivation for exercise</i>	3.18	0.71	<i>Often</i>
Weighted Mean		3.00	
SD		0.74	
Verbal Interpretation		High	

With a mean score of (M=2.92, SD=0.70) is associated with the student's vision of maintaining and improving their fitness beyond the scope of the program, although still 'Often' is indicative of a minor area for potential enhancement. This could mean that while the program instills a degree of long-term fitness goals, it may be beneficial to implement strategies that strengthen students' intentions to continue fitness practices independently.

The overall weighted mean of 3.00 and standard Deviation 0.74, with a verbal interpretation of 'High', reflects that students generally perceive the training program to have a favorable influence on their physical fitness. It indicates that on average,

students sense noticeable benefits from their participation in the program, supporting its general effectiveness.

The implications of these results are twofold. First, the program's strong influence on students' motivation to engage in exercise is encouraging as it indicates that the training is succeeding in creating a positive attitude towards physical fitness. Second, the slightly lower scores in areas concerning the perception of body composition change and the carryover of fitness habits post-program imply that there could be room for improvement. It may be beneficial to incorporate more explicit education on recognizing physical changes and setting personal, long-term fitness goals to foster an enduring



commitment to physical well-being. Overall, the data reflects that while the standardized training program is effective in promoting physical fitness among students, continual refinement and focus on sustaining long-term fitness habits could further bolster the program's impact.

Level of the Standardized Training Program in terms of Health and Wellness

The standardized training program extends beyond physical education and seeks to promote Health and Wellness. This aspect of the program is crucial as it encompasses not just physical health but also mental and emotional well-being. The current analysis is designed to measure the program's effectiveness in instilling a comprehensive understanding and practice of Health and Wellness principles. Through this evaluation, we aim to determine how the program supports students in developing healthy habits, making informed choices, and understanding the importance of maintaining overall well-being.

The focus of the results in evaluating the effectiveness of the standardized training program in terms of Health and Wellness.

This critical assessment seeks to understand how well the program equips students with knowledge, practices, and attitudes that contribute to their overall well-being. By examining students' responses to the program, we aim to gain insights into its impact on various aspects of health and wellness, including well-being, nutrition guidance, the importance of health goals, incorporation of healthy practices, and sustainability of health enhancements beyond the program.

The highest observed mean score is 3.28, which relates to the student's ability to give importance to health and wellness goals and their perception of the program's support in these areas. This is a positive indication that the program is effective in raising students' awareness and commitment toward their health and wellness objectives.

The mean score 3.00 and a standard deviation 0.78, is associated with the perception of the program providing adequate guidance on nutrition. Although this score still falls within the 'High' category, it highlights nutrition guidance as a potential area for improvement compared to other elements of the training program.

Table 3 Level of the Standardized Training Program in terms of Health and Wellness

<i>STATEMENT</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>The students...</i>			
<i>Describe your overall sense of well-being since starting the training program.</i>	3.02	0.65	<i>Often</i>
<i>Feel that the program has provided adequate guidance on nutrition for overall health.</i>	3.00	0.78	<i>Often</i>
<i>Give importance to the health and wellness goals, and do you feel the program has supported these goals</i>	3.28	0.73	<i>Always</i>
<i>Practices have sets of instructions that are incorporated into your routine since joining the training program.</i>	3.09	0.67	<i>Often</i>
<i>Maintain and enhance your health beyond the duration of the program.</i>	3.12	0.73	<i>Often</i>
Weighted Mean		3.10	
SD		0.72	
Verbal Interpretation		High	

With an overall weighted mean of 3.10 and a standard deviation of 0.72, the program receives a 'High' verbal interpretation concerning its effectiveness in promoting health and wellness among students. This demonstrates that, on average, students positively recognize the program's role in enhancing their understanding and practices related to health and wellness.

The analysis indicates that the standardized training program is largely successful in fostering a positive attitude and practices toward health and wellness. The highest scores reflect a robust foundation in emphasizing the importance of health goals and supporting students in these endeavors. However, the relatively lower scores for nutrition guidance indicate a need for the program to enrich its content or methodologies in this area. Strengthening the nutrition component could enhance the comprehensiveness of the health and wellness education provided, ensuring that students are well-equipped with knowledge and habits for lasting health. Overall, the findings support the continued development and refinement of the

program to ensure it fully meets the health and wellness needs of students.

Level of Athletes Well-Being

This study sought to evaluate the efficacy and comprehensiveness of the standardized training program. It specifically aimed to assess the program's level in cultivating Athletes Well-Being in terms of Social Connection, Lifestyle Habit, Time Management, Resilience and Coping skills and Energy Level. Through this investigation, we endeavored to understand the impact of structured training on young learners and the implications for their overall physical education and health.

The level of the athletes well-being was revealed in the following table, showing the statement, mean, standard deviation and verbal interpretation.

Level of Athletes' Well-being in terms of Social Connection

The level of well-being of athletes is a multifaceted concept that



extends beyond physical capabilities and includes social elements crucial to their overall development. In the evaluation of athletes' well-being, particularly in terms of Social Connection, we aim to understand the intricacies of how social interactions, team dynamics, and a sense of belonging influence their experiences and satisfaction within the athletic environment. This analysis will provide insight into the level of social cohesion and connectivity that athletes perceive, which is fundamental to both their personal growth and collective success in sports.

Based on the data provided in Table 4 on the Level of Athletes' Well-being in terms of Social Connection, the interpretation focuses on how social interactions within sports teams influence athletes' sense of well-being.

The evaluation aims to explore the social dimensions of athletes' experiences, particularly how their connections within sports teams contribute to their sense of well-being. Understanding these dynamics is crucial as it provides insights

into the role of social support, team cohesion, and conflict management in fostering a positive sports environment.

The highest mean scores, both at 3.28 and a standard deviation 0.68, are seen in athletes' participation in team-building activities and their observation of positive changes in social connections since joining the sports program. Both aspects are marked with the remark "Always," indicating a consistently positive impact on athletes' social well-being. It highlights the effectiveness of team-building activities in strengthening social bonds and enhancing athletes' perception of their social environment.

With a mean score of 3.12 and standard deviation of 0.66, corresponds to how athletes handle conflicts or disagreements within the team. Despite being categorized as "High," it is slightly lower than other aspects, indicating room for improvement in conflict resolution skills and strategies within teams to minimize negative impacts on athletes' well-being.

Table 4 Level of Athletes' Well-being in terms of Social Connection

<i>STATEMENT</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>The students...</i>			
<i>Feel a sense of belonging within your sports team or community.</i>	3.25	0.65	<i>Often</i>
<i>Participated in team-building activities, and if so, how have they impacted your social connections</i>	3.28	0.68	<i>Always</i>
<i>Engage in social interactions with teammates outside of training or competitions</i>	3.19	0.71	<i>Often</i>
<i>Observed any positive changes in your social connections since joining the sports program</i>	3.28	0.68	<i>Always</i>
<i>Handle conflicts or disagreements within the team and how does it impact your overall well-being.</i>	3.12	0.66	<i>Often</i>
Weighted Mean		3.12	
SD		0.75	
Verbal Interpretation		High	

The overall weighted mean of 3.12 and a standard deviation of 0.75, is interpreted as "High." This indicates that, on average, athletes perceive their social connections within the sports environment positively, contributing significantly to their overall well-being.

The analysis indicates that the athletes' well-being, in terms of social connection, is generally maintained at a high level, with particular strengths in team-building activities and the positive evolution of social relationships. However, the slightly lower scores in conflict management present an opportunity for sports programs to incorporate more focused strategies and training on constructive conflict resolution and effective communication.

Enhancing these skills can further improve the social atmosphere within teams, ensuring that all members feel supported and understood, ultimately contributing to their well-

being and the overall success of the sports program.

Level of Athletes' Well-being in terms of Lifestyle Habit

Within the context of sports, the health and well-being of athletes considerably rely on their lifestyle habits. From diet and sleep patterns to stress management techniques, these habits form the backbone of an athlete's performance and overall wellness. In evaluating the Level of Athletes' Well-being in terms of Lifestyle Habits, we aim to gauge the effectiveness of the training program in facilitating and promoting healthy lifestyle choices among athletes. This analysis looks into the extent to which athletes have integrated balanced and health-conscious habits into their routines, thereby contributing to improved overall well-being and athletic performance.



Table 5 Level of Athletes' Well-being in terms of Lifestyle Habit

STATEMENT	MEAN	SD	REMARKS
<i>The students...</i>			
<i>Are conscious of maintaining a balanced diet to support your athletic Performance.</i>	3.22	0.73	<i>Often</i>
<i>Prioritize getting adequate rest and recovery between training sessions and competitions</i>	3.18	0.70	<i>Often</i>
<i>Share specific practices or habits you've adopted to enhance your overall health and well-being</i>	2.98	0.78	<i>Often</i>
<i>Manage stress in your daily life, and are there specific strategies you find effective.</i>	3.08	0.73	<i>Often</i>
<i>Balance the demands of your athletic training with other commitments in your life.</i>	3.18	0.72	<i>Often</i>
Weighted Mean		3.13	
SD		0.73	
Verbal Interpretation		High	

Based on Table 5, detailing the Level of Athletes' Well-being in terms of Lifestyle Habit, we dive into how athletes incorporate lifestyle habits that significantly impact their overall well-being and athletic performance. This analysis seeks to outline the efficacy of those habits as perceived by the athletes themselves. This evaluation underscores the critical role that lifestyle habits play in the holistic well-being of athletes. It examines the integration and impact of such habits on their ability to perform, recover, and maintain a balance between their athletic and personal life commitments.

The highest mean score (M=3.22,SD=0.73) is attributed to the athletes' consciousness in maintaining a balanced diet to support their athletic performance, falling under the "Always" category. This indicates that nutritional awareness is notably high among athletes, recognizing its paramount importance in achieving optimal performance levels.

With a mean score is (M=2.98, SD=0.78) related to the athletes' sharing of specific practices or habits adopted to enhance overall health and well-being, categorized as "High." This indicates a slightly less consistent approach to implementing and sharing effective wellness practices, possibly pointing to areas where athletes require more guidance or resources. With an overall weighted mean of 3.13 and a standard deviation of 0.73, the verbal interpretation of the data is "High." This reflects a generally positive acknowledgment by athletes of the lifestyle habits incorporated into their routines, affirming that these habits substantially contribute to their well-being.

The insights from Table 5 present a nuanced understanding of the lifestyle habits among athletes, focusing on aspects such as diet, rest, stress management, and maintaining a balance with other life commitments. Similarity can be observed in the prioritization athletes place on maintaining a balanced diet and ensuring adequate rest and recovery. This shared emphasis underscores a collective awareness of the foundational role these practices play in enhancing athletic Performance. Contrary to the relative consensus on diet and rest, the practice

of sharing specific health-enhancing behaviors indicates a divergence in how athletes engage with and perceive the importance of communal knowledge exchange on well-being practices.

The analysis reveals a strong awareness and practice among athletes regarding the maintenance of a balanced diet, which is crucial for their performance. The relatively lower score in sharing specific health and well-being practices indicates an area for improvement in the community or team-based knowledge exchange on health habits. By fostering an environment where athletes feel more encouraged and supported to share and adopt new healthful practices, sports programs can enhance the overall well-being of their athletes. The findings endorse the need for targeted educational programs or workshops focusing on holistic health practices, stress management, and balancing athletic with personal commitments, ensuring athletes can sustain their health and performance in the long term.

Level of Athletes' Well-being in terms of Time Management

Time management is a crucial skill for athletes, who must juggle training, competitions, and personal responsibilities. In the analysis of the Level of Athletes' Well-being in terms of Time Management, we aim to assess how effectively athletes are able to allocate and utilize their time to maintain a harmonious balance between their sporting commitments and other areas of life. This vital facet of an athlete's routine can significantly influence their stress levels, recovery, and overall satisfaction with their athletic pursuits and lifestyle.

Analyzing the data from Table 6 regarding the Level of Athletes' Well-being in terms of Time Management provides insights into how athletes navigate the intricate balance between their academic, athletic, and personal lives. This scrutiny sheds light on the athletes' ability to manage their time effectively, which is paramount in fostering both their academic success and athletic performance while also attending to personal life obligations.



Table 6 Level of Athletes' Well-being in terms of Time Management

<i>STATEMENT</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>The students...</i>			
<i>Prioritize and manage your time to balance academic commitments, sports training, and personal activities</i>	3.33	0.64	<i>Always</i>
<i>Allocate enough time for both your athletic and academic responsibilities.</i>	3.09	0.74	<i>Often</i>
<i>Manage time effectively, and how do you address or overcome these challenges</i>	2.99	0.74	<i>Often</i>
<i>Have an approach to time management contribute to your overall mental and physical well-being as an athlete</i>	3.02	0.74	<i>Often</i>
<i>Notice changes in your overall energy levels since participating in the training program.</i>	3.24	0.73	<i>Often</i>
Weighted Mean		<i>3.14</i>	
SD		<i>0.73</i>	
Verbal Interpretation		High	

With a mean of 3.33 and a standard deviation of 0.64, the "always" remark is associated with the athletes' ability to prioritize and manage time to balance academic commitments, sports training, and personal activities. This states that athletes excel most in the holistic integration of their various responsibilities into a cohesive schedule.

At the lower end, a mean score of 2.99 and a standard deviation 0.74, marked "High," indicates there is room for improvement in athletes' ability to manage time effectively and address or overcome related challenges. This points towards a need for enhanced time management strategies or support.

The overall weighted mean stands at 3.14 and a standard deviation of 0.73, receives a "High" verbal interpretation. This portrays that, in general, the athletes exhibit a proficient command of time management, with a positive trend towards these skills bolstering their well-being

The results paint a picture of athletes who are largely successful in managing their time, thereby positively affecting their well-being. The high level of time management for athletic and academic duties coupled with increased energy levels post-training program participation is commendable. However, the lowest scores in managing time effectively hint at potential stress points that could be alleviated with additional time management training or resources. Introducing or improving educational workshops that focus on time management skills could be beneficial. These programs may lead to enhancements in areas where athletes feel less proficient, ultimately promoting a more robust well-being framework that supports their sports and academic ventures while also catering to personal development.

Level of Athletes' Well-being in terms of Resilience and Coping Skills

Resilience and coping skills stand as two of the most integral elements contributing to an athlete's overall well-being. In this analysis, we will delve into the Level of Athletes' Well-being in terms of Resilience and Coping Skills, examining how athletes navigate setbacks, handle stress, and bounce back from adversities. This capacity to maintain psychological strength in challenging situations is vital to their mental health, performance on the field, and overall life satisfaction.

The exploration into the Level of Athletes' Well-being in terms of Resilience and Coping Skills is pivotal in understanding how athletes surmount challenges and persist through adversities. These abilities not only bear significant implications on their sports performance but also on their overall psychological health and life satisfaction.

The highest mean score, at 3.30 and a standard deviation 0.69 with an "Always" remark, was attributed to the athletes' ability to seek support or guidance from teammates, coaches, or other sources when facing adversity. This indicates that the strongest aspect of athletes' resilience and coping mechanism lies in their proactive approach to seeking external support, highlighting the role of a supportive environment in enhancing athlete well-being. With a mean of 3.04 and a standard deviation 0.70 marked as "High," associated with providing examples of specific coping strategies employed during high-stress situations. This indicates that while athletes generally manage stress well, there is variability and perhaps a need for more structured approaches or education around specific coping strategies.



Table 7 Level of Athletes' Well-being in terms of Resilience and Coping Skills

<i>STATEMENT</i> <i>The students...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>Cope with challenges or setbacks, both within your sport and in other areas of life.</i>	3.19	0.63	<i>Often</i>
<i>Feel the training program has helped enhance your resilience and coping skills.</i>	3.13	0.73	<i>Often</i>
<i>Provide examples of specific coping strategies you employ during high-stress situations.</i>	3.04	0.70	<i>Often</i>
<i>Seek support or guidance from teammates, coaches, or other sources when facing adversity in your sports journey.</i>	3.30	0.69	<i>Always</i>
<i>Shared a difficult situation you've faced in sports and the strategies you used to overcome it and learn from it.</i>	3.21	0.72	<i>Often</i>
Weighted Mean		3.18	
SD		0.70	
Verbal Interpretation		High	

With an overall weighted mean of 3.18 and a standard deviation of 0.70, the data falls under a "High" verbal interpretation. This underscores a generally high level of resilience and coping skills among the athletes, indicating a robust foundation to face and overcome challenges.

The results signify that overall, athletes demonstrate commendable resilience and adeptness at coping with stress and adversities, both in their sports careers and life in general. The highest scores affirm the critical role of social support networks, including teammates and coaches, in fostering resilience. Conversely, the area identified with the lowest mean indicates a potential gap in either the athletes' repertoire of specific coping strategies or their ability to articulate these strategies.

This insight can inform targeted interventions or enhancements in sports psychology and training programs, emphasizing the development and clear communication of coping strategies. Enhancing these areas may not only improve athletes' performance but also contribute positively to their psychological well-being and sense of fulfillment.

In summary, Table 7 analysis reveals a generally high level of resilience and adaptability among athletes, with subtle differences in individual coping strategies. Despite these differences, the overall tendency towards positive, task-oriented coping mechanisms indicates a promising foundation for further developing resilient qualities in sports settings.

Table 8 Level of Athletes' Well-being in terms of Energy Level

<i>STATEMENT</i> <i>The students...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>Feel that there are changes since the beginning of using the standardized program to improve the athlete's energy level</i>	3.02	0.65	<i>Often</i>
<i>Notice that the energy level on days improves the athlete's participation in training.</i>	3.04	0.74	<i>Often</i>
<i>The overall stamina and endurance increase using the standardized program.</i>	3.12	0.72	<i>Often</i>
<i>Find themselves motivated to engage in physical activities outside of the structured training sessions.</i>	3.07	0.67	<i>Often</i>
<i>Able to concentrate and stay focused from the beginning up to the end of the training program.</i>	3.20	0.70	<i>Often</i>
Weighted Mean		3.09	
SD		0.70	
Verbal Interpretation		High	

The analysis of the Level of Athletes' Well-being with a focus on their energy levels is a critical component of athletic performance, and overall well-being is a reflection of the athlete's physical and mental state. It encompasses their vitality, endurance, and overall capacity to engage in training, competitions, and daily activities. This exploration seeks to uncover how athletes maintain their energy levels amidst rigorous training schedules and the demands of their sport, offering insights into their well-being and ability to perform

optimally.

The analysis ventures into assessing the Level of Athletes' Well-being, specifically focusing on their energy levels. This exploration is centered around evaluating how athletes maintain their vitality, endurance, and engagement amidst the rigorous demands of their training and overall sport-related activities.

The highest mean score presented within the study was 3.20,



with observations stating athletes were "able to concentrate and stay focused from the beginning up to the end of the training program". This aspect scored under the "High" category, indicating that athletes' ability to maintain focus and concentration during training is a critical indicator of their well-being and an indirect measure of their energy levels.

With a mean of 3.02 and a standard deviation of 0.65 associated with the athletes' perception of "feeling that there are changes since the beginning of using the standardized program to improve the athlete's energy level". Despite being classified under "Always", this indicates that among the facets surveyed, the perceived improvement in energy levels since the inception of the program was the least pronounced.

With an overall weighted mean of 3.09 and a standard deviation of 0.70, the consolidated data achieves a "High" verbal interpretation. This overall assessment demonstrates that, on average, the athletes perceive a high level of energy, indicating positive outcomes from their participation in the standardized training program.

The outcomes of the data analysis underline a generally high level of energy among athletes, which is fundamental to their performance and well-being. Athletes report the highest scores in concentration, and focus indicates that the standardized program not only aids physical endurance but also mental stamina. However, the lowest scores indicating perceived changes in energy levels since beginning the program could

highlight areas for refinements in program communication or implementation, ensuring athletes can more distinctly recognize the benefits over time.

In conclusion, the insights from Table 8 reflect a generally positive impact of the standardized program on the athletes' energy levels, highlighting both its effectiveness and the need to address individual variations in response.

Level of Athletes' Performance in terms of Practical Task

Table 9 provides a detailed look at athletes' performance levels across various practical tasks, focusing on serving, passing, and tossing skills. For serving, the data show a moderate level of agreement among athletes about their ability to perform a variety of serves with the highest mean score being 3.07 and a standard deviation of 1.24. However, when it comes to the accuracy of their serves, athletes report the mean of 2.81, coupled with the standard deviation of 1.40, indicating significant variability in perceived serving accuracy. In contrast, passing skills are rated slightly higher, with technique receiving the highest mean score of 3.12 and a standard deviation of 1.36, indicating a high level of confidence among athletes in their passing abilities. Consistency in passing, although slightly lower at a mean of 2.96, still suggests a reliable level of performance. For tossing, consistency is rated highly with a mean of 3.09, while the accuracy of tossing is slightly lower at 2.96, both indicating relatively stable perceptions among athletes about their tossing skills.

Table 9 Level of Athletes' Performance in terms of Practical Task

<i>SERVING</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>Accuracy</i>	2.81	1.40	<i>Intermediate</i>
<i>Variety of serving</i>	3.07	1.24	<i>Intermediate</i>
<i>Consistency</i>	2.95	1.29	<i>Intermediate</i>
Weighted Mean		2.95	
SD		1.31	
Verbal Interpretation		High	
<i>PASSING</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>Accuracy</i>	3.03	1.34	<i>Intermediate</i>
<i>Technique</i>	3.12	1.36	<i>Intermediate</i>
<i>Consistency</i>	2.96	1.36	<i>Intermediate</i>
Weighted Mean		3.04	
SD		1.36	
Verbal Interpretation		High	
<i>TOSSING</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>Accuracy</i>	2.96	1.34	<i>Intermediate</i>
<i>Height</i>	3.05	1.27	<i>Intermediate</i>
<i>Consistency</i>	3.09	1.31	<i>Intermediate</i>
Weighted Mean		3.04	
SD		1.31	
Verbal Interpretation		High	

The overall analysis, with a weighted mean consistently above 2.95 and standard deviations ranging from 1.27 to 1.40 across all categories, interprets to a high level of skill performance. Yet, the considerable variability reflected by the standard deviations points to differing confidence levels and capabilities among individual athletes. The largest standard deviation in serving accuracy highlights a particular area for improvement

through focused training. Meanwhile, the more uniform standard deviations and higher means in passing and tossing suggest these are areas of greater confidence and consistency for the athletes.

These insights underline the necessity for personalized coaching strategies that cater to individual needs, emphasizing



the development of less consistent areas to boost overall performance and confidence. The evaluations serve as a vital tool in recognizing athletes' self-perceived strengths and weaknesses, guiding tailored training programs that not only reinforce strengths but also address and enhance weaker aspects, with the goal of elevating athletes' performance even further.

The implications of these results suggest that while there is a small cohort of athletes demonstrating an "Expert" level of skills, the overall performance leans towards the middle of the spectrum. Given that the bulk of athletes are at an "Intermediate" level, coaches and trainers can infer that there might be a pervasive need for enhanced training programs to elevate the athletes' proficiency in their practical tasks. Moreover, the presence of a substantial "Beginner" group highlights the necessity for foundational skill development.

To aid in accelerating skill acquisition and performance, focused efforts may be required. These may encompass differentiated coaching methodologies, increased practice time for skill development, or targeted drills that hone the specific competencies reflected in the rubric. The aim of such

interventions would be geared towards shifting the distribution towards more advanced levels, ultimately improving the overall performance metrics within the evaluated group.

Significant Relationship Between the Standardized Training Program and Student's Well-Being

The interplay between standardized training programs and student well-being stands as a focal point of contemporary educational and psychological research. This investigation aims to explore the significant relationships that might exist between rigorously designed, standardized training programs and the multifaceted dimensions of student well-being, including mental, physical, and emotional health. By employing quantitative and qualitative methodologies to scrutinize these potential correlations, the study endeavors to shed light on how structured training regimens, often applied in both academic and athletic contexts, impact the holistic well-being of students. This inquiry is grounded in the hypothesis that standardized training, with its inherent emphasis on discipline, regularity, and consistency, could play a pivotal role in enhancing or detracting from students' overall well-being, thereby influencing their academic performance, emotional stability, and physical health in significant ways.

Table 10 Significant Relationship Between the Standardized Training Program and Athlete's Well-Being

Standardized Training Program	Athlete's Well-Being				
	Social Connection	Lifestyle Habit	Time Management	Resilience and Coping Skills	Energy Level
Physical Literacy	0.086**	0.304**	0.087**	0.137**	0.024**
Pearson Correlation	0.000	0.000	0.000	0.000	0.047
Sig. (2-tailed)	161	161	161	161	161
N					
Physical Fitness Test	0.282**	0.276**	0.211**	0.213**	0.003**
Pearson Correlation	0.000	0.000	0.000	0.000	0.000
Sig. (2-tailed)	161	161	161	161	161
N					
Health and Wellness	0.299**	0.226**	0.301**	0.153**	0.008**
Pearson Correlation	0.000	0.000	0.000	0.000	0.000
Sig. (2-tailed)	161	161	161	161	161
N					

Note: ** $p < .05$

This analysis focuses on identifying significant relationships between standardized training programs and various dimensions of student well-being, namely Social Connection, Lifestyle Habits, Time Management, Resilience and Coping Skills, and Energy Level. The purpose is to explore how structured training regimens in Physical Literacy, Physical Fitness Testing (PFT), and Health and Wellness correlate with these well-being metrics.

Among all measured aspects of well-being, the highest mean level of correlation is observed in the association between Physical Literacy training and Lifestyle Habits, with a Pearson correlation coefficient of 0.304, interpreted as a low-level correlation but statistically significant ($P = 0.000$).

The lowest mean level of correlation surfaces in the relationship between Physical Fitness Testing (PFT) and Energy Level, yielding a Pearson correlation coefficient of 0.003, which falls

within the negligible category of correlation ($P = 0.000$).

Across all categories, even though some correlations are deemed negligible, notably with Energy Levels in some instances, all P-values signify statistical significance ($P < 0.05$). This indicates that, despite some low to negligible correlation coefficients, there is a statistically significant relationship between standardized training programs and all assessed factors of student well-being. Particularly, aspects such as Social Connection, Lifestyle Habits, and Time Management consistently show low yet significant correlations across all three standardized training programs.

The results highlight the nuanced impact standardized training programs have on student well-being. While the levels of influence vary—with Lifestyle Habits generally showing the strongest correlational relationship—it is evident that engagement in structured training in Physical Literacy, PFT,



and Health and Wellness consistently correlates with positive dimensions of well-being. This indicates that even modestly increasing participation in such standardized programs could foster improvements in specific well-being facets.

Given these correlations, educational and athletic programs might consider the integration or enhancement of standardized training components not just for physical development but also for the ancillary benefits of student well-being. Furthermore, the significance of these relationships, despite some being low, underscores the importance of a holistic approach in educational and athletic planning, where fostering well-being is considered alongside physical and athletic skill development.

Significant Relationship Between the Standardized Training and Athletes' Performance

In the quest to delineate the relationship between standardized training programs on athletes' performance metrics, this

analysis investigates the presence and magnitude of significant relationships between regimented training methodologies and tangible performance outcomes in athletes. By scrutinizing the correlation between adherence to a uniform training regimen and the consequent performance levels across various practical tasks, such as serving, passing, and tossing, the study aims to uncover insights into how structured training interventions influence the skill development and execution prowess of athletes. This investigation is anchored on the premise that standardized training, characterized by systematic, replicable, and empirically grounded techniques, plays a pivotal role in enhancing the athletic performance, thereby serving as a foundational element in the pursuit of sporting excellence.

This analysis seeks to unearth significant relationships between standardized training in Physical Literacy, Physical Fitness Testing (PFT), Health and Wellness, and students' practical task performance in athletics

Table 11 Significant Relationship Between the Standardized Training and Athletes' Performance

Standardized Training Program	Practical Task	
Physical Literacy	Pearson Correlation	0.004
	Sig. (2-tailed)	0.421
	N	161
Physical Fitness Test (PFT)	Pearson Correlation	0.000
	Sig. (2-tailed)	0.941
	N	161
Health and Wellness	Pearson Correlation	0.00
	Sig. (2-tailed)	0.999
	N	161

*Note: **p<.05*

The provided data on table 11 explores the relationship between a standardized training program and three different dimensions of athletes' performance: practical tasks, physical fitness tests (PFT), and health and wellness. Each of these dimensions has been analyzed using the Pearson Correlation Coefficient—an indicator of the strength and direction of a linear relationship between two variables—and a significance value determined by a two-tailed significance test, along with the sample size (N) for the tested group.

The Pearson Correlation between the standardized training and athletes' performance on practical tasks is 0.004, and the significance (two-tailed) is 0.421. This very low correlation coefficient near zero suggests there is virtually no linear relationship between the standardized training programs and the athletes' practical task performance within the sample of 161 athletes. Moreover, the high significance value ($p > 0.05$) means the correlation observed is not statistically significant, indicating that any relationship between the training program and practical task performance due to chance is quite likely.

Similarly, the correlation regarding physical fitness tests (PFT) is 0.000 with a corresponding significance level of 0.941. This indicates no correlation between the standardized training program and the performance on PFTs. The extremely high p-

value reaffirms that any correlation is likely due to random variation and not statistically significant within this sample.

In respect to health and wellness, the Pearson Correlation is also 0.00, and the significance level registers at 0.999. This indicates an absence of a relationship between the standardized training and the athletes' health and wellness outcomes, with the maximum p-value suggesting that the observed result is entirely within the range of chance, providing strong evidence against any meaningful correlation.

Considering all three dimensions in aggregate, the standardized training program does not demonstrate a significant correlation with improvements in athletes' performance related to practical tasks, physical fitness test scores, or health and wellness metrics within this particular group. The correlation coefficients are negligible, and the significance levels are well above the conventional threshold of 0.05 for statistical significance. This suggests there is no substantial evidence to support the claim that the standardized training is related to the performances and outcomes measured in this context.

However, it is also crucial to consider that correlation does not imply causation, and the lack of a significant linear relationship



does not necessarily mean that the standardized training is ineffective. Other factors could influence these performance domains, including the appropriateness of the training program for the specific cohort, the athletes' individual characteristics, adherence levels, or the sensitivity of the measures used to detect changes.

4. CONCLUSION AND RECOMMENDATIONS

Based on the data collected, the researcher concluded that:

1. Significant correlations between standardized training programs (PFT, Health and Wellness, and Physical Literacy) and students' well-being were found through statistical analysis. including social connection, lifestyle habits, time management, resilience, coping skills, and energy level. Consequently, the null hypothesis was rejected. These results suggest that a learner's engagement in a standardized training program depends critically on their well-being.
2. There is no significant relationship between the standardized training program—focusing on Physical Literacy, PFT, and Health and Wellness—and athletes' performance. Therefore, the hypothesis that this training program did not significantly affect athletes' well-being was accepted. It is possible that standardized program's length or level of intensity was inadequate, or that it lacked customization to meet the specific requirements in identifying athletes. There was a chance that additional factors like nutrition or extra training outside of the program could have been more important.

Given the study's conclusions, the following recommendations are made for PE teachers/Coaches to enhance the effectiveness of the standardized training program and further benefit student-athletes:

1. Implement additional or revised training modules specifically aimed at improving athletes' practical performance levels, considering the lack of significant relationship found between the current program and practical performance outcomes.
2. Continue emphasizing aspects that received high ratings—Physical Literacy, Health and Wellness, Social Connection, Time Management, Resilience and Coping Skills, and Energy Level—by incorporating more integrated activities that align with these well-being dimensions to reinforce their positive outcomes.
3. Utilize the insights gained from the p-value and statistical significance findings to make data-driven adjustments in the standardized training program, ensuring that modifications are targeted to areas that will most effectively improve both the athletes' well-being and performance capabilities.

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PREDICTORS OF MATHEMATICS ANXIETY: ITS RELATION TO THE STUDENTS' ACADEMIC BEHAVIOR IN MATHEMATICS

Julius Caesar Castillo Lita

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study aims to determine the predictors of math anxiety and its relation to the students' academic behavior in mathematics. It analyzes the profile of the respondents, assess students' level of math anxiety academic behavior. It also establish relationships between respondent profiles and mathematics anxiety on academic behavior.

The research design used in this study is descriptive method of research. The respondents of this study is selected using a purposive sampling method composed of 200 private senior high school students from the division of Laguna. A researcher-made and expert-validated survey questionnaire composed of three parts was used in this study.

The findings show that most respondents are 19-year-old, female ABM strand students. The majority has a medium socioeconomic status and came from households with moderate family sizes. The study identifies varying levels of math anxiety among students, they were very anxious to subject mastery and instructional strategies, and moderately anxious to ability and confidence, learning environment, and feedback and encouragement. The findings also indicate that students generally exhibit low academic behavior in mathematics. The results show that there is a significant relationship between students' demographic profile and academic behavior in mathematics. Moreover, there is a significant relationship between the predictors of mathematics anxiety and students' academic behavior in mathematics.

It was observed that there is significant relationship between the students' demographic profile as well as predictors of mathematics anxiety on their academic behavior in mathematics thus leading to the rejection of both hypotheses. This means that developing customized teaching approaches to address the diverse backgrounds of students is important. Moreover, curricula should focus on foundational understanding and skill-building in mathematics to alleviate anxiety and promote a positive academic experience, thus fostering creativity and innovation.

The study recommends teachers adjust teaching methods to suit varying levels of math anxiety and academic behavior among students. Students are encouraged to reflect on strengths, weaknesses, and anxiety coping strategies, while leaders should provide growth opportunities.

KEYWORDS: *predictors; math anxiety; students' academic behavior*

1. INTRODUCTION

The cornerstone of education and the advancement of humanity is mathematics, which is frequently referred to as the language of science and a necessary talent for modern life. However, the idea of having to work with mathematical ideas and equations fills a lot of students with dread and worry.

Mathematics anxiety is a widespread problem that cuts across age, gender, and educational levels. It is characterized by dread, tension, and unease when faced with mathematical activities. Mathematics anxiety has drawn the attention of educators, psychologists, and academics as an emotional roadblock to mathematical learning.

The negative effects of mathematics anxiety go beyond simple emotional anguish. It adversely affects academic performance, preventing students from developing to their full mathematical potential. The nagging question in education is not just "why" math anxiety occurs, but also "what factors contribute to its development, persistence, and, ultimately, how it relates to students' academic behavior in math."

There are many students that have mathematics anxiety in a variety of educational settings, making it a widespread issue. Many students, whether in elementary school, high school, or further education, struggle with math anxiety to varied degrees. As a result, individuals could engage in avoidance behaviors, choose a different course of study, or adopt a fixed mentality that lowers their self-efficacy in mathematical activities.

It has long been understood that math anxiety, a common psychological phenomenon, is a significant obstacle to scholastic success in mathematics. When faced with mathematical problems, people's anxiety can be crippling and have a negative impact on their confidence, ability to solve problems, and performance in the subject.

This study examined the complex relationship between math anxiety and students' academic behavior in mathematics with the goal of illuminating the root causes, effects, and potential remedies for this pervasive problem. This research aimed to provide a thorough understanding of math anxiety's role in education and propose strategies to empower students in overcoming this significant barrier on their path to mathematical success. This can be done by looking at the

factors causing math anxiety, its negative effects on students' attitudes and mathematical achievements, and the interventions designed to lessen its impact.

1.1 Statement of the Problem

Specifically, this study answered the following questions;

1. What is the student's demographic profile with regards to:
 - 1.1 age;
 - 1.2 sex;
 - 1.3 Strand;
 - 1.4 Socio-Economic Status; and
 - 1.5 Family Size?
2. What is the level of predictors of mathematics anxiety with regards to:
 - 2.1 Subject Mastery;
 - 2.2 Instructional Strategies;
 - 2.3 Ability and Confidence;
 - 2.4 Learning Environment; and
 - 2.5 Feedback and Encouragement?
3. What is the level of students' academic behavior with regards to:
 - 3.1 Task Completion;
 - 3.2 Self-Regulation;
 - 3.3 Study Habits;
 - 3.4 Creativity and Innovation; and
 - 3.5 Collaborative Attitude
4. Do the demographic profile of respondents have a significant relationship to students' academic behavior in mathematics?
5. Do the predictors of mathematics anxiety have a significant relationship to students' academic behavior in mathematics?

2. METHODOLOGY

The research design used in this study was descriptive method of research to analyze the relationship between the predictors of mathematics anxiety and the students' academic behavior in mathematics of selected senior high school students in the division of Laguna.

To investigate this question, a quantitative research design specifically, the survey method of quantitative research was applied in this study.

According to Creswell, the descriptive research design is a study that describes the characteristics of a population or phenomenon being studied. Primarily used to gain an understanding of a group or phenomenon. This involves collecting data through surveys, interviews, or observation.

In the course of answering research questions, 'strongly agree' and 'agree' were classified as agree. Similarly, 'strongly disagree' and 'disagree' were classified as disagree.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, interpretation and analysis of data gathered to determine the correlation between the predictors of mathematics anxiety and the students'

academic behavior in mathematics.

Demographic Profile of Respondents

In this study, the demographic profile of respondents refer to age, sex, strand, socio-economic status, and family size.

The following figures illustrate the detailed demographic breakdown of the respondents. By presenting this information visually through pie charts the researcher offer a clear and concise overview of the key demographic profile of the respondents. These visual representations will enable us to quickly grasp the distribution and proportions within the sample, facilitating a deeper understanding of the sample under study.

Figure 1 presented the age distribution of students within the sample. 96 of the 200 students are 19 years old, making this the most common age group in the dataset. Additionally, 90 pupils are 18 years old, which is the second largest number. On the other hand, only 14 pupils are 17 years old, indicating a much lower proportion of the sample.

Understanding student age distribution is critical for educational institutions and policymakers to tailor their programs, curriculum, and support services to the needs of students at various phases of their academic careers. This information can be used to build age-appropriate learning resources, address age-specific issues, and foster a supportive and inclusive learning environment for students of all ages.

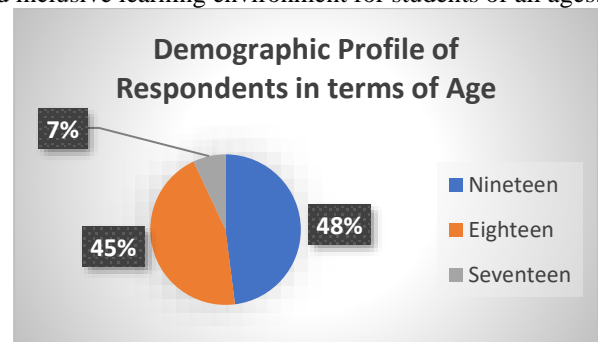


Figure 1. Demographic Profile of the Respondents in terms of Age

Figure 2 depicts the student gender profile. It was discovered that 78 out of 200 respondents are male, while 122 out of 200 are female. This suggests that the sample has a higher proportion of female students. Females constitute the majority of the student population.

Understanding student gender distribution is critical for educational institutions and policymakers seeking equitable access and representation in a variety of academic and extracurricular activities. It aids in recognizing potential gender gaps and adopting initiatives to achieve gender equality in education. Furthermore, this information might help in designing programs and support services that cater to the specific needs and experiences of male and female students.

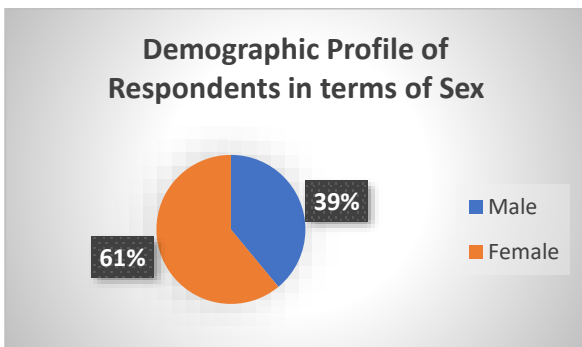


Figure 2. Demographic Profile of the Respondents in terms of Sex

Figure 3 presented the respondents' profile by strand. Of the 200 students enrolled, 34 are in the TVL strand and 33 are in the HUMSS strand. 27 pupils have chosen the GAS strand, while 45 students have chosen the STEM strand. Finally, the ABM strand has the largest enrollment percentage, with 61 students opting for this academic track.

These figures provide vital insights into students' preferences and choices when choosing their academic paths. They provide educational institutions with advice on resource allocation, curriculum development, and offering a varied range of options for students to pursue their interests and careers.

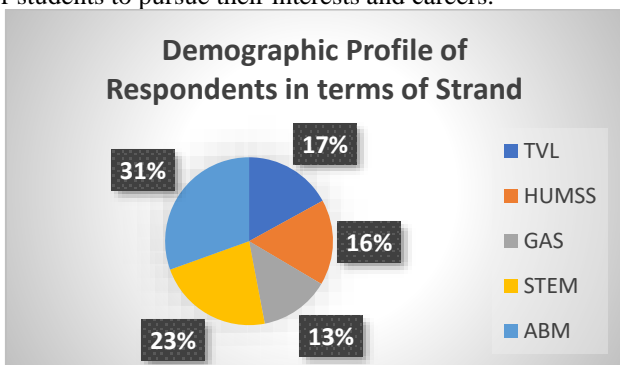


Figure 3. Demographic Profile of the Respondents in terms of Strand

Figure 4 represents the distribution of pupils based on their socio-economic status. Out of the 200 pupils included in the study, 37 were identified as having a poor socio-economic status. This suggests that just a tiny minority of students come from low-income households. The majority of pupils, 157 to be precise, are classified as having a medium socioeconomic status. This indicates that a sizable proportion of the student population comes from households with moderate financial stability. On the other hand, just 6 students, particularly, were classed as having a high socio-economic status. This suggests that a small proportion of the students come from households with more economic status and resources.

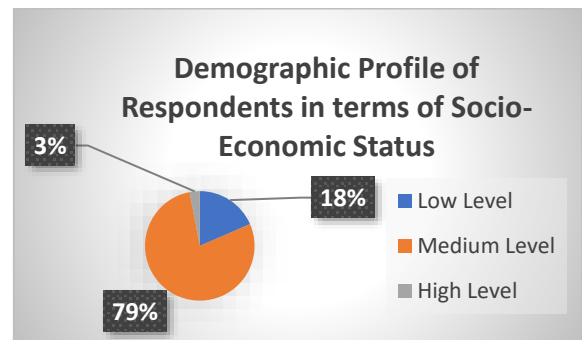


Figure 4. Demographic Profile of the Respondents in terms of Socio-Economic Status

Understanding the socio-economic profile of the student population is critical for educational institutions and policymakers in tailoring support and resources to the requirements of students from various socio-economic backgrounds. It can aid in the identification and resolution of potential educational hurdles, as well as the creation of an inclusive learning environment that supports equal opportunity for all students, regardless of socioeconomic situation.

The family size distribution of the pupils is summarized in Figure 5. Of the 200 pupils that were part of the study, 18 were from large households. It can be concluded that a minority of students live with a comparatively larger number of relatives.

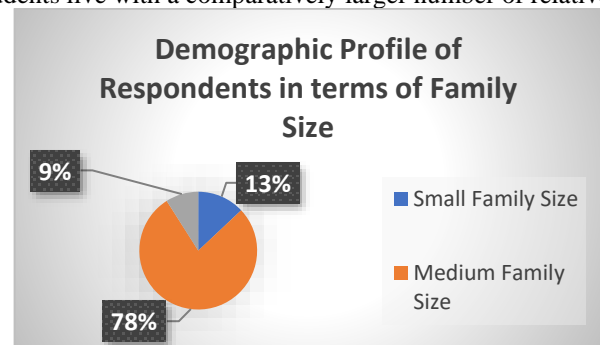


Figure 5. Demographic Profile of the Respondents in terms of Family Size

The majority of students—156 in total—come from households with moderate incomes. This suggests that a sizable fraction of students come from homes with a moderate number of family members. On the other hand, 26 pupils, however, come from modest backgrounds. This means that a smaller percentage of students originate from households with fewer members.

By analyzing the student population distribution according to family size, one can gain an understanding of the social dynamics and student support systems. By developing their programs and services to each student's unique needs based on their family size, educational institutions and policymakers can benefit from it. In order to meet their specific demands, students from smaller homes might benefit from specialized resources, whereas students from bigger families would need more assistance with household tasks.

Level of Predictors of Mathematics Anxiety

In this study, the level of Predictors of Mathematics anxiety refers to Subject Mastery; Instructional Strategies; Ability and



Confidence; Learning Environment; and Feedback and Encouragement.

The following tables shows the statement, mean, standard deviation and remarks.

Table 1 illustrates the level of predictors of mathematics anxiety with regards to subject mastery as perceived by students.

Table 1. Level of Students' Mathematics Anxiety with regards to Subject Mastery

STATEMENT	MEAN	SD	REMARKS
<i>My difficulty in understanding mathematical concepts contributes to my anxiety in math class.</i>	3.67	0.94	Agree
<i>When I feel overwhelmed by math problems, I become anxious about my ability to do well in math class.</i>	3.87	0.92	Agree
<i>I often feel like I don't understand the concepts being taught in mathematics class.</i>	3.44	1.08	Agree
<i>I feel anxious when I have to take mathematics tests.</i>	3.47	1.04	Agree
<i>I feel frustrated when I cannot solve mathematics problems</i>	3.95	1.00	Agree
Weighted Mean		3.68	
SD		1.02	
Verbal Interpretation			Very Anxious

Students agree that they experience frustration when they are unable to answer mathematical problems (M= 3.95, SD= 1.00). This implies a need for better problem-solving support and resources to reduce frustration. Likewise, getting overwhelmed by mathematics problems makes them worry about performing well in math class (M= 3.87, SD= 0.92), suggesting that strategies to manage complexity could enhance performance. Students also agree that their inability to comprehend mathematical concepts significantly impacts their anxiety levels in math class (M= 3.67, SD= 0.94), indicating that improving comprehension could reduce anxiety. They acknowledge feeling nervous before mathematics tests (M= 3.47, SD= 1.04), pointing to the potential benefit of test-taking strategies and anxiety reduction techniques. Lastly, students express doubts about their comprehension of the material

covered in math class (M=3.44, SD=1.08), highlighting the need for clearer instruction and additional support.

The weighted mean score of 3.68 and the standard deviation of 1.02 indicate that students were very anxious with regards to subject mastery in mathematics class. These findings highlight the importance of treating conceptual understanding issues, overcoming daunting math problems, and controlling test-related anxiety in order to successfully reduce total mathematics anxiety.

Table 2 illustrates the level of predictors of mathematics anxiety with regards to instructional strategies as perceived by students.

Table 2. Level of Predictors of Mathematics Anxiety with regards to Instructional Strategies

STATEMENT	MEAN	SD	REMARKS
<i>I feel anxious when my teachers move too quickly through mathematical concepts</i>	3.92	0.98	Agree
<i>I feel anxious when my teacher explains mathematics concepts using abstract methods.</i>	3.58	0.89	Agree
<i>I feel anxious when my teacher uses a lot of technical jargon and terminology</i>	3.81	0.93	Agree
<i>I feel anxious about rules and procedures and understanding problem-solving alongside memorization</i>	3.61	1.07	Agree
<i>I feel anxious when my mistakes are criticized and emphasized errors</i>	3.97	0.99	Agree
Weighted Mean		3.78	
SD		0.98	
Verbal Interpretation			Very Anxious

Students agree that they feel anxious when faults are highlighted and reprimanded (M= 3.97, SD= 0.99). This implies that a more supportive and less punitive approach could reduce anxiety. Similarly, teachers who proceed quickly

through mathematical concepts cause significant anxiety (M= 3.92, SD= 0.98), suggesting the need for a slower, more deliberate teaching pace. The use of a lot of technical language also contributes to their anxiety (M= 3.81, SD= 0.93),



indicating a benefit in simplifying language. Abstract teaching methods add to their anxiety as well (M= 3.58, SD= 0.98), which implies that more concrete and relatable teaching methods might be more effective. Additionally, there is anxiety associated with understanding rules and procedures, solving problems, and memorizing information (M= 3.61, SD= 1.07), highlighting the need for strategies that simplify these aspects and improve comprehension.

In summary, a high degree of agreement is shown by the weighted mean of 3.78 and the standard deviation of 0.98, this indicates that the students were very anxious with regards to instructional materials which underscore the important role that

these factors play in increasing respondents' mathematical anxiousness. This shows that students' experiences of anxiety in the mathematics classroom are influenced by these characteristics of teaching and learning.

It contributes to the field by focusing on mathematics anxiety among students in remedial mathematics courses, a topic that is crucial for educators and institutions.

Table 3 illustrates the level of predictors of mathematics anxiety with regards to ability and confidence as perceived by students.

Table 3. Level of Predictors of Mathematics Anxiety with regards to Ability and Confidence

STATEMENT	MEAN	SD	REMARKS
<i>I doubt my ability to succeed in mathematics</i>	3.50	1.13	Agree
<i>I am discouraged by my mathematics performance</i>	3.26	1.11	Neither Agree nor Disagree
<i>I am afraid of making mistakes in mathematics</i>	3.56	1.27	Agree
<i>I give up easily when I face difficulties in mathematics</i>	3.00	1.16	Neither Agree nor Disagree
<i>I am afraid of being judged for my mathematics ability</i>	3.61	1.15	Agree
Weighted Mean		3.38	
SD		1.18	
Verbal Interpretation		Moderately Anxious	

Respondents generally agree that being evaluated based entirely on their understanding of mathematics causes significant anxiety (M= 3.61, SD= 1.15). This implies the need for diverse evaluation methods to reduce anxiety. Participants also fear making mistakes in math (M= 3.56, SD= 1.27), suggesting that a more forgiving and supportive learning environment could help alleviate this fear. Many respondents doubt their ability to succeed in mathematics (M= 3.50, SD= 1.13), indicating a need for confidence-building measures and support. There is less agreement about feelings of discouragement over arithmetic performance (M= 3.26, SD= 1.11), suggesting that while some students feel discouraged, it is not a universal experience. Similarly, there is less consensus

on the propensity to give up quickly when things get tough (M= 3.00, SD= 1.16), highlighting that while persistence is an issue for some, it is not predominant for all students.

The average level of agreement across all statements is indicated by the weighted mean scores of 3.38 and the standard deviation of 1.18, indicating a moderately anxious level between the respondents' ability and confidence, and mathematical anxiety.

Table 4 illustrates the level of predictors of mathematics anxiety with regards to the learning environment as perceived by students.

Table 4. Level of Predictors of Mathematics Anxiety with regards to Learning Environment

STATEMENT	MEAN	SD	REMARKS
<i>I feel isolated and unsupported in my mathematics class</i>	2.95	1.13	Neither Agree nor Disagree
<i>I feel discouraged and disengaged from learning mathematics in my current learning environment.</i>	2.97	1.11	Neither Agree nor Disagree
<i>My mathematics class focuses too much on abstract concepts and not enough on real-world applications</i>	3.14	1.27	Neither Agree nor Disagree
<i>My mathematics class is a stressful and competitive environment</i>	3.18	1.16	Neither Agree nor Disagree
<i>My mathematics class has a limited time for students to practice math problems</i>	3.42	1.15	Agree
Weighted Mean		3.13	
SD		1.10	
Verbal Interpretation		Moderately Anxious	



Across the statements, respondents frequently show mixed feelings, neither strongly agreeing nor strongly disagreeing with certain features of their mathematics classroom setting. Respondents agree that students in their mathematics class have little time to practice arithmetic problems (M= 3.42, SD= 1.15), suggesting a need for more practice opportunities. Some respondents perceive their mathematics class as stressful and competitive (M= 3.18, SD= 1.16), indicating that a more supportive and collaborative environment might be beneficial. There are also concerns that the class concentrates too much on abstract concepts (M= 3.14, SD= 1.27), implying a need for more concrete and relatable teaching methods. However, there is significant variability in these perceptions, as indicated by the high standard deviations. Moreover, respondents report feeling discouraged and disengaged from learning mathematics (M= 2.97, SD= 1.11) and feeling alone and unsupported (M= 2.95, SD= 1.13). These responses suggest that while some students feel a lack of motivation and support, this is not a universal

experience. The variability in responses implies that individual experiences in the mathematics classroom can differ widely, highlighting the need for tailored approaches to address the diverse needs of students.

The weighted mean of 3.13, along with a standard deviation of 1.10, indicates an average level of agreement across all statements. Overall, the data show a complex view of the learning environment's relationship on mathematics anxiety among respondents, with some areas of concern but also variation in perceptions across different parts of the classroom experience the students were moderately anxious with regards to learning environment.

Table 5 illustrates the level of predictors of mathematics anxiety with regards to feedback and encouragement as perceived by students.

Table 5. Level of Predictors of Mathematics Anxiety with regards to Feedback and Encouragement

STATEMENT	MEAN	SD	REMARKS
<i>My mathematics teacher focuses more on my mistakes than on my progress.</i>	2.76	1.23	Neither Agree nor Disagree
<i>I am less likely to participate in mathematics class when I am afraid of receiving negative feedback.</i>	3.31	1.17	Neither Agree nor Disagree
<i>The way feedback is delivered in mathematics makes me anxious.</i>	3.32	1.04	Neither Agree nor Disagree
<i>I feel more anxious about mathematics when I do not receive any feedback.</i>	3.35	1.04	Neither Agree nor Disagree
<i>I feel anxious when I receive feedback on my mathematics assignments.</i>	3.25	1.09	Neither Agree nor Disagree
Weighted Mean		3.20	
SD		1.14	
Verbal Interpretation		Moderately Anxious	

Across various statements, respondents reveal a spectrum of sentiments, neither unequivocally endorsing nor firmly rejecting different facets of their mathematics classroom environment. For instance, they express feeling both discouraged and disengaged from learning mathematics (M= 2.97, SD= 1.11) and also feeling alone and unsupported (M= 2.95, SD= 1.13), highlighting a diversity of experiences among students. This variability underscores the necessity for tailored interventions to effectively address individual needs. Additionally, perceptions vary, with some students perceiving their mathematics class as stressful and competitive (M= 3.18, SD= 1.16), while others feel it emphasizes abstract concepts excessively (M= 3.14, SD= 1.27). These findings underscore the importance of implementing teaching strategies that alleviate stress and foster a supportive learning environment, as well as ensuring a balanced approach to abstract and concrete learning experiences. Nevertheless, respondents unanimously agree that students in their mathematics class have insufficient time to practice arithmetic problems (M=3.42, SD= 1.15), signaling a clear need to allocate more time for practice to enhance understanding and proficiency in

mathematics.09948128475

The weighted mean of 3.20, along with a standard deviation of 1.14, indicates an average level of agreement across all statements interpreted as moderately anxious. Overall, the findings provide a varied perspective on the impact of feedback and encouragement on respondents' mathematics anxiety, with different levels of agreement across different components of the feedback process.

Level of Students' Academic Behavior in Mathematics

In this study, the level of Predictors of Mathematics anxiety refers to Subject Mastery; Instructional Strategies; Ability and Confidence; Learning Environment; and Feedback and Encouragement.

The following tables shows the statement, mean, standard deviation and remarks.

Table 6 offers insights into students' academic behavior in mathematics relative to task completion as perceived by the students.



Table 6. Level of Students' Academic Behavior in Mathematics relative to Task Completion

STATEMENT	MEAN	SD	REMARKS
<i>I set realistic goals for myself when completing math problems.</i>	2.37	0.90	Disagree
<i>I break down complex math problems into smaller, more manageable steps.</i>	2.37	0.88	Disagree
<i>I prioritize my math assignments and manage my time effectively.</i>	2.53	1.00	Disagree
<i>I persist in the face of challenges and setbacks when solving math problems.</i>	2.47	0.79	Disagree
<i>I seek help from teachers or tutors when I need assistance with math problems.</i>	2.37	1.05	Disagree
Weighted Mean		2.42	
SD		0.93	
Verbal Interpretation		Low	

Students' responses indicate several areas where they struggle with important academic skills and behaviors. They particularly disagreed with statements regarding setting realistic goals (M= 2.37, SD= 0.90), breaking down complex problems (M=2.37, SD= 0.88), and seeking help when needed (M= 2.37 SD= 1.05), suggesting a challenge in developing effective problem-solving strategies and recognizing the importance of seeking assistance. Additionally, they exhibited difficulty in prioritizing assignments and managing time (M= 2.53, SD= 1.00), implying potential issues with time management and organizational skills. Moreover, students showed reluctance in persisting through challenges (M= 2.47, SD= 0.79), highlighting a need for fostering resilience and perseverance in the face of academic difficulties. These findings underscore the

importance of implementing interventions and support mechanisms to enhance students' academic skills and behaviors essential for success in their education.

The overall weighted mean of 2.42, with a standard deviation of 0.93, indicates a generally low level of effective academic behavior in mathematics among students. This suggests that students may lack important skills and strategies needed for successful task completion in math, highlighting areas where educational interventions could be beneficial.

Table 7 offers insights into students' academic behavior in mathematics relative to self-regulation as perceived by the students.

Table 7. Level of Students' Academic Behavior in Mathematics relative to Self-Regulation

STATEMENT	MEAN	SD	REMARKS
<i>I set clear and achievable goals for myself when learning mathematics concepts.</i>	2.33	0.92	Disagree
<i>I regularly monitor my understanding of mathematics concepts through self-testing and practice problems.</i>	2.52	0.92	Disagree
<i>I utilize various study techniques, such as flashcards, practice problems, concept maps, and mnemonic devices, to enhance my learning.</i>	2.69	1.03	Neither Agree nor Disagree
<i>I manage my anxiety and stress during mathematics tests or challenging assignments through relaxation techniques, positive self-talk, and deep breathing exercises.</i>	2.46	1.08	Disagree
<i>I adjust my learning strategies based on my understanding of the material and the task at hand.</i>	2.18	0.80	Disagree
Weighted Mean		2.43	
SD		0.97	
Verbal Interpretation		Low	

The findings from the statements indicate that students tend to struggle with key self-regulation practices essential for academic success. Specifically, they demonstrate disagreement with practices such as setting clear and achievable goals (mean of 2.33, SD= 0.92), adjusting learning strategies (mean of 2.18, SD=), and consistently monitoring their understanding (mean of 2.52, SD=). Moreover, they neither agree nor disagree on the utilization of various study techniques (mean of 2.69, SD=), indicating uncertainty or inconsistency in their approach to

studying.

These results highlight a significant challenge in maintaining effective self-regulation strategies among students, particularly in the context of mastering mathematics. Addressing these struggles is essential for enhancing students' academic performance and fostering their overall learning outcomes.

The weighted mean of 2.43, with a standard deviation of 0.97,



suggests a low level of academic behavior among all statements. This implies that students generally exhibit poor self-regulation behaviors when learning mathematics, indicating a passive attitude toward their academic efforts. This lack of self-regulation can impede their ability to learn and perform well in mathematics, highlighting a need for

interventions to develop better self-regulation skills.

Table 8 offers insights into students' academic behavior in mathematics relative to study habits as perceived by the students.

Table 8. Level of Students' Academic Behavior in Mathematics relative to Study Habits

<i>Statement</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>I create a dedicated and distraction-free study space for mathematics.</i>	2.52	0.84	Disagree
<i>I set a consistent and realistic study schedule for mathematics.</i>	2.69	0.86	Neither Agree nor Disagree
<i>I actively engage with mathematics concepts through reading, note-taking, and summarizing key points.</i>	2.45	0.99	Disagree
<i>I practice solving mathematics problems regularly to reinforce my understanding and problem-solving skills.</i>	2.73	1.06	Neither Agree nor Disagree
<i>I avoid procrastination and distractions during mathematics study sessions.</i>	2.63	1.04	Neither Agree nor Disagree
Weighted Mean		2.60	
SD		0.97	
Verbal Interpretation		Low	

The students expressed disagreement with the importance of creating a dedicated and distraction-free study space (M= 2.52, SD= 0.84) and actively engaging with mathematics concepts through reading, note-taking, and summarizing (M= 2.45, SD= 0.86), suggesting potential challenges in maintaining focus and concentration during study sessions. Their lack of strong agreement or disagreement on setting a consistent and realistic study schedule (M= 2.69, SD= 0.99), practicing problem-solving regularly (M= 2.73, SD= 1.06), and avoiding procrastination and distractions (M= 2.63, SD= 1.04) implies uncertainty or variability in their approach to time management and study habits. These findings underscore the need for interventions aimed at promoting effective study strategies and cultivating a conducive learning environment to enhance students' academic performance and comprehension of

mathematical concepts.

The overall weighted mean of 2.60 and a standard deviation of 0.97 indicate a generally low level of agreement with positive study habits. These findings suggest that students have not fully developed effective study habits necessary for success in mathematics. The low level of agreement with these essential study practices highlights a need for strategies and interventions to help students establish better study routines and improve their academic performance in mathematics.

Table 9 presents insights into students' academic behavior in mathematics relative to creativity and innovation as perceived by the students

Table 9. Level of Students' Academic Behavior in Mathematics relative to Creativity and Innovation

<i>STATEMENT</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>I enjoy exploring multiple approaches to solving mathematics problems.</i>	2.57	0.84	Disagree
<i>I am curious about different ways of representing and understanding mathematical concepts.</i>	2.27	0.86	Disagree
<i>I am willing to take risks and try out new things in mathematics</i>	2.25	0.99	Disagree
<i>I am interested in developing new and original solutions to mathematics problems.</i>	2.30	1.06	Disagree
<i>I believe that mathematics can be a tool for innovation and creativity.</i>	2.07	1.04	Disagree
Weighted Mean	2.29		
SD	1.04		
Verbal Interpretation	Low		

Students displayed disagreement with several aspects crucial for fostering creativity and innovation in mathematics. They disagreed with enjoying exploring multiple approaches to solving problems (M= 2.57, SD= 0.84) and being curious about

different ways of representing and understanding concepts (M= 2.27, SD= 0.86), indicating potential barriers to embracing diverse perspectives and approaches to problem-solving. Furthermore, they showed a lack of willingness to take risks



and try new things (M= 2.25, SD= 0.99), develop new and original solutions (M= 2.30, SD= 1.06), and view mathematics as a tool for innovation and creativity (M= 2.07, SD= 1.04), suggesting a challenge in cultivating a mindset conducive to innovation and creativity within the realm of mathematics. These findings underscore the importance of fostering a culture of experimentation, risk-taking, and creative thinking in mathematics education to inspire students to explore and innovate in the field.

The overall weighted mean of 2.29, along with a standard deviation of 1.04, indicates a low level of agreement among students regarding creative and innovative behaviors in

mathematics. These findings highlight a general lack of engagement with creative and innovative practices in mathematics, suggesting that students do not view the subject as an avenue for exploring diverse methods or developing novel solutions. This underscores a need for educational strategies that foster a more innovative and creative approach to learning mathematics.

Table 10 provides insights into students' academic behavior in mathematics relative to their collaborative attitude as perceived by the students.

Table 10. Level of Students' Academic Behavior in Mathematics relative to Collaborative Attitude

STATEMENT	MEAN	SD	REMARKS
<i>I enjoy working with others to solve mathematics problems.</i>	2.15	1.04	Disagree
<i>I believe that collaboration can lead to better understanding and problem-solving in mathematics.</i>	1.93	0.91	Disagree
<i>I am willing to share my ideas and insights with others when working on mathematics projects.</i>	2.15	0.97	Disagree
<i>I can effectively communicate my mathematical ideas and concepts to others.</i>	2.45	1.06	Disagree
<i>I take an active role in contributing to the success of mathematics group projects.</i>	2.34	0.96	Disagree
Weighted Mean		2.20	
SD		1.01	
Verbal Interpretation		Low	

Students demonstrated disagreement with several aspects essential for effective collaboration and communication in mathematics. They generally disagreed with enjoying working with others to solve problems (M= 2.15, SD= 1.04) and being willing to share ideas and insights (M= 2.15, SD= 0.97), suggesting potential challenges in fostering a collaborative mindset and encouraging active participation within group settings. Additionally, they showed skepticism regarding the benefits of collaboration for better understanding and problem-solving (M= 1.93, SD= 0.91), indicating a need for interventions aimed at highlighting the value of teamwork in mathematics education. Furthermore, students displayed difficulty in effectively communicating mathematical ideas (M= 2.45, SD= 1.06) and actively contributing to group projects (M= 2.34, SD= 0.96), underscoring the importance of developing communication skills and promoting active engagement in collaborative learning environments. These findings underscore the significance of fostering a collaborative and communicative classroom culture to enhance students' teamwork skills and overall learning outcomes in mathematics.

The overall weighted mean of 2.20, with a standard deviation of 1.01, reflects a low level of agreement among students regarding positive collaborative behaviors in mathematics. These findings suggest a significant lack of enthusiasm and effectiveness in collaborative efforts within the context of mathematics, indicating that students do not perceive collaboration as a beneficial or enjoyable part of their

mathematical learning experience. This highlights a need for strategies to enhance students' collaborative skills and attitudes, promoting a more cooperative and supportive learning environment in mathematics.

Significant Relationship between Demographic Profile of Respondents and Students' Academic Behavior in Mathematics

The significant relationship of the demographic profile on students' academic behavior in mathematics, data were treated statistically using spreadsheet by Regression Analysis.

Table 11 shows the results of the statistical analysis of the significant relationship of the demographic profile on students' academic behavior in mathematics, with various demographic profiles analyzed against different aspects of academic behavior.

The data includes the demographic profiles of age, sex, strand, socio-economic status, and family size, along with their respective effects on students' self-efficacy on task completion, self-regulation, study habits, creativity and innovation, and collaborative attitude

The analysis shows that age has no significant relation on task completion with R-value ranging from 0.000 to 0.006 and p-value from 0.293 to 0.848. Similarly, sex has no significant relation on task completion with R-value ranging from 0.000 to



0.019 and p-value from 0.052 to 0.979. Moreover, the strand of students' education has no significant relation with task completion ($r = 0.016$, $p = 0.078$) and collaborative attitude ($r = 0.023$, $p = 0.213$) but has a significant relation on self-regulation ($r = 0.036$, $p = 0.007$); study habits ($r = 0.021$, $p = 0.039$); and creativity and innovation ($r = 0.069$, $p = 0.000$). Additionally, socioeconomic status had no significant relation on most of the academic behavior of the students ($r = 0.000$ -

0.010 , $p = 0.149$ - 0.996) except for collaborative attitude ($r = 0.019$, $p = 0.048$). Similar to the previous variable, family size had no significant relation on task completion ($r = 0.011$, $p = 0.141$), self-regulation ($r = 0.005$, $p = 0.315$), study habits ($r = 0.005$, $p = 0.300$), and creativity and innovation ($r = 0.000$, $p = 0.985$). Nonetheless, a significant relation exists between family size and collaborative attitude ($r = 0.041$, $p = 0.004$).

Table 11. Significant Relationship of the Demographic Profile on Students' Academic Behavior in Mathematics

Demographic Profile (IV)	Academic Behavior of Students (DV)				
	Task Completion	Self-regulation	Study Habits	Creativity and Innovation	Collaborative Attitude
Age:					
Pearson Correlation	0.005	0.002	0.006	0.000	0.003
p-value	0.317	0.485	0.293	0.848	0.408
N	200	200	200	200	200
Sex:					
Pearson Correlation	0.019	0.001	0.001	0.000	0.007
p-value	0.052	0.615	0.704	0.979	0.213
N	200	200	200	200	200
Strand:					
Pearson Correlation	0.016	0.036*	0.021*	0.069*	0.023
p-value	0.078	0.007	0.039	0.000	0.213
N	200	200	200	200	200
Socio-Economic Status:					
Pearson Correlation	0.000	0.007	0.004	0.010	0.019*
p-value	0.996	0.225	0.349	0.149	0.048
N	200	200	200	200	200
Family Size:					
Pearson Correlation	0.011	0.005	0.005	0.000	0.041*
p-value	0.141	0.315	0.300	0.985	0.004
N	200	200	200	200	200

Note: * $p < .05$.

In summary, the statistical analysis shows that while some demographic factors, such as age and sex, have no significant effect on academic behavior, others, such as strand, socio-economic status and family size, have a significant impact on students' approach to task completion, self-regulation, study habits, creativity and innovation, and collaborative attitude in mathematics. These findings provide important insights into the impact of demographic characteristics on students' academic behavior and may drive tailored interventions to assist their academic growth.

Test of Significant Relationship between Predictors of Mathematics Anxiety and Academic Behavior of Students

To test the significant relationship between the predictors of mathematics anxiety and academic behavior of students, data were treated statistically using Minitab 14 using the Pearson Correlation Coefficient.

The table summarizes the results of the study examining the predictors of mathematics anxiety and their correlation with

various aspects of students' academic behavior using the Pearson Correlation Coefficient in a Linear Regression Analysis.

Subject mastery revealed very weak positive correlation with task completion ($r = 0.005$), self-regulation ($r = 0.002$), study habits ($r = 0.009$), and collaborative attitude ($r = 0.002$), none of which are statistically significant. However, there is a weak positive correlation with creativity and innovation (0.044), which is statistically significant ($p = 0.003$). Instructional strategies show very weak positive correlations with task completion (0.009), self-regulation (0.000), study habits (0.001), creativity and innovation (0.015), and collaborative attitude (0.018), none of which are statistically significant. Moreover, for ability and confidence, the correlations with task completion (0.000), self-regulation (0.001), study habits (0.005), creativity and innovation (0.003), and collaborative attitude (0.015) are all very weak and not statistically significant.



Table 12. Significant Relationship between Predictors of Mathematics Anxiety and Academic Behavior of Students

Predictors of Mathematics Anxiety (IV)	Academic Behavior of Students (DV)				
	Task Completion	Self-Regulation	Study Habits	Creativity and Innovation	Collaborative Attitude
Subject Mastery:					
Pearson Correlation	0.005	0.002	0.009	0.044*	0.002
p-value	0.324	0.513	0.162	0.003	0.560
N	200	200	200	200	200
Instructional Strategies:					
Pearson Correlation	0.009	0.000	0.001	0.015	0.018
p-value	0.164	0.761	0.589	0.081	0.061
N	200	200	200	200	200
Ability and Confidence:					
Pearson Correlation	0.000	0.001	0.005	0.003	0.015
p-value	0.659	0.637	0.309	0.415	0.082
N	200	200	200	200	200
Learning Environment:					
Pearson Correlation	0.009	0.001	0.003	0.037*	0.013
p-value	0.166	0.593	0.469	0.007	0.113
N	200	200	200	200	200
Feedback & Encouragement:					
Pearson Correlation	0.002	0.008	0.003	0.003	0.001
p-value	0.544	0.209	0.451	0.455	0.625
N	200	200	200	200	200

Note: * $p < .05$.

Learning environment shows very weak positive correlations with task completion (0.009), self-regulation (0.001), study habits (0.003), and collaborative attitude (0.013), none of which are statistically significant. However, there is a weak positive correlation with creativity and innovation (0.037), which is statistically significant ($p = 0.007$). Finally, feedback and encouragement show very weak positive correlations with task completion (0.002), self-regulation (0.008), study habits (0.003), creativity and innovation (0.003), and collaborative attitude (0.001), none of which are statistically significant.

Overall, the analysis revealed that most predictors of mathematics anxiety exhibit very weak positive correlations with different aspects of students' academic behavior, and the majority of these correlations are not statistically significant. The exceptions are the statistically significant weak positive correlations between creativity and innovation with subject mastery and with the learning environment. These findings suggest that while there may be some influence of these predictors on academic behaviors, their impact is generally minimal, with only specific areas showing meaningful relationships.

4. CONCLUSION AND RECOMMENDATIONS

It was observed that there is significant relationship between the demographic profile of the students and their academic behavior in mathematics thus leading to the rejection of the null hypothesis. This highlights the necessity for targeted interventions that cater to the specific needs of different demographic groups. Educators and policymakers can develop customized teaching approaches to address the diverse backgrounds of students, such as varying socio-economic

statuses, ages, and genders, ensuring that each group receives appropriate support.

Similarly, there is significant relationship between the predictors of mathematics anxiety and students' academic behavior leading to the rejection of null hypothesis. The findings emphasize that factors such as subject mastery, instructional strategies, ability and confidence, learning environment, and feedback and encouragement significantly influence students' academic behaviors in mathematics. Consequently, it is crucial to address these predictors to mitigate mathematics anxiety and improve academic performance.

Considering the findings and conclusions of the study, the following are recommended.

1. Teachers may modify their instructional approach to accommodate students' various levels of mathematics anxiety and academic behavior. This could include adding more collaborative activities, giving constructive criticism, and creating a supportive learning atmosphere that encourages creativity and innovation.
2. Students may participate in self-reflection to recognize their mathematical skills and weaknesses, as well as develop anxiety-reducing strategies. Thus setting realistic goals, getting aid when necessary, and developing healthy study habits can all help improve academic success.
3. Parents may play an important role in their children's intellectual development. They should provide a supportive family atmosphere that promotes open communication, fosters a good attitude toward mathematics, and offers opportunities for additional assistance if necessary.



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KABISIG: SANAYANG AKLAT SA PAGTUKLAS NG ILANG AKDANG BISAYA AT KAALAMAN SA PAGKATHA NG TANAGA

Lara Mae An Garcia

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pag-aaral na ito ay nakatuon sa KABISIG: Sanayang aklat sa Pagtuklas ng Ilang Akdang Bisaya at ng ikalabing isang baitang ng Liceo de Pila, Pila, Laguna sa Taong Aralan 2023-2024. Ang nagsilbing tagatugon sa pananaliksik na ito ay ang isandaa't limampu't apat (154) mag-aaral na naging tagasagot sa pagtanggap ng binuong materyal bilang pantulong sa pagkatuto sa mga paksa sa Filipino. Ang sumusunod ay ang mga suliraning nais bigyan ng pansin: Ano ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Pagsasalin, Kasapatan, Kaangkupan at Disenyo? Ano ang lebel ng kaalaman sa pagkatha ng tanaga batay sa Kawastuhan, Kaisahan, Tema at Estilo? Ano ang Antas ng kabisaan sa kagamitang instruksiyunal sa asignaturang filipino batay sa Rasyunal na pagsulat? May makabuluhang epekto ba ang KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya? May makabuluhang epekto ba ang KABISIG sa kaalaman sa pagkatha ng tanaga?

Ang sumusunod ay ang lumabas na resulta ng pag-aaral.

Ayon sa nakalap na datos sa tulong ng istatistika, nagkaroon ng maayos na pagkakabuo ang KABISIG bilang suplementaryong kagamitan sa pagkatuto at pag-unawa ng ilang akdang Bisaya. Ipinakikita rito ang positibong pagtanggap ng mga guro at mag-aaral pagdating sa iba't-ibang aspeto ng sanayang-aklat.

Nakatala sa lumabas na resulta, karamihan sa mga mag-aaral na nagsagawa ng pagkatha ng tanaga ay may sapat na kaalaman ngunit hindi ganoon kahusay sa usaping pagsulat sapagkat batay sa ebalwasyon ng guro, sila ay naglalaro sa katamtamang husay lamang na bahagyang taliwas sa kanilang tugon sa talatanungan.

Sa kabuoang isang daan at limamput-dalawang tagatugon, ang marka na "26 - 30" ay nakakuha ng pinakamataas na bilang na isang daan at dalawamput-apat (124). Habang ang marka na "21 - 25" ay nakakuha ng pinakamababang bilang na tatlumpu (30) o 19.49% ng kabuoang tumugon at may mapaglarawang katumbas na Higit na Mahusay.

Ipinapakita na ang antas ng kabisaan sa kagamitang instruksiyunal sa asignaturang filipino ay may mapaglarawang katumbas na "Pinakamahusay" at may literal na paliwanag na Napakakasiya-siya.

Makabuluhang epekto ng KABISIG sa kaalaman sa pagkatha ng tanaga. Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto ng KABISIG sa Rasyunal na pagsulat at 0.05 antas ng kabuluhan. At ipinapakita nito na walang epekto sa pagitan nila. pinatutunayan naman dito na maaari itong linangin.

Mula sa Konklusyon, nagbigay ang mananaliksik ng rekomendasyon na gamitin ang materyal bilang kagamitan sa pagtuturo ng mga aralin sa Filipino sa ikalawang markahan na kung saan ito ay nakatuon sa akdang Bisaya.

SUSING SALITA: KABISIG; Sanayang aklat; Akdang Bisaya

1. PANIMULA

Napakaraming mga akdang pampanitikan mula sa iba't ibang bahagi ng bansa ang hindi nabibigyang tuon o natatapanan ng pansin sapagkat sa halip na mapalawak ito sa ating lupain ay mas pinag-aaralan pa ng nakararami at nakalimbag sa mga aklat ang tungkol sa akdang pampanitikang ipinagmamalaki ng ibang bansa.

Ang guro ay mabisang kasangkapan sa loob ng silidalaran, ngunit kung ito ay salat sa mga kagamitang panturo at walang pedagogikal na batayan sa kaniyang pagtuturo, walang espasyo ang karunungan at pagkatuto. Ang isa sa layunin ng edukasyon ay mahubog ang kaisipan ng mga mag-aaral at magkaroon ng kaalaman sa mga bagay-bagay at impormasyon sa kasalukuyan, sa hinaharap at sa kinabukasan, upang makamit ang tagumpay sa iba't ibang larangan ng buhay. Malaki ang gampanin ng guro sa kaniyang mga mag-aaral at isa ito sa pinakamahalagang propesyon sa ating lipunan. Kailangang tiyakin ng guro na malinang ang pinakamataas na kasanayan ng bawat mag-aaral mula sa kritikal na pag-iisip hanggang sa mga makrong kasanayan. Mahalaga rin na ang guro ay malikhain sa pagbuo

ng mga estratehiya sa pagtuturo upang makuha ang atensyon sa aralin at lubos na maunawaan ng mga mag-aaral.

Ayon sa R.A. No. 7722 o mas kilala bilang "Higher Education Act of 1994" nagkaroon ng resolusyon bilang R-002-2017 noong ika-16 ng Hunyo taong 2017. Nakasaad sa batas ang pagkakaroon ng Filipino at Panitikan bilang kursong panlahat sa kolehiyo bilang bahagi ng New General Education Curriculum sa CHED Memorandum Order No. 20 Series of 2013.

Ayon sa pag-aaral ni Espinosa (2014), mula kay Arrogante "Ang panitikan ay talaan ng buhay sapagkat naipapahayag ng tao ang kanyang saloobin o damdamin tungkol sa isang bagay, maging ang kanilang kinagisnang kultura at paniniwala".

Kaya naman ang mananaliksik ay nasuma ang ilang bagay na may kinalaman mga problemang ito at nagkaroon ng paglalahat na magkaroon ng pananaliksik na gumawa ng sanayang aklat sa pagtuklas ng ilang akdang bisaya at magkaroon ng pagtatasa sa kaalaman sa pagkatha ng tanaga para mga mag-aaral na



kasalukuyang nag-aaral ng panitikan ng mga Bisaya kabilang na ang awiting bayan, alamat, maikling kwento at iba pa.

1.1 Paglalahad ng Suliranin

Ang pag-aaral na ito ay ginabayan ng mga sumusunod na katanungan:

1. Ano ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa:
 - 1.1 Pagsasalin;
 - 1.2 Kasapatan;
 - 1.3 Kaangkupan; at
 - 1.4 Disenyo?
2. Ano ang antas ng kaalaman sa pagkatha ng tanaga batay sa:
 - 2.1 Kawastuhan;
 - 2.2 Kaisahan;
 - 2.3 Tema; at
 - 2.4 Estilo?
3. Ano ang Antas ng kabisaan sa kagamitang instruksiyunal sa asignaturang Filipino batay sa:
 - 3.1 Rasyunal na pagsulat?
4. May makabuluhang epekto ba ang KABISIG: sanayang aklat sa pagtuklas ng ilang akdang bisaya sa kabisaan ng kagamitang instruksiyunal?
5. May makabuluhang epekto ba ang KABISIG sa kaalaman sa pagkatha ng tanaga sa kabisaan ng kagamitang instruksiyunal?
6. Ano ang maaaring mabuong programa sa pag-aaral na ito?

2. METODOLOHIYA NG PANANALIKSIK

Ang disenyong ginamit ng mananaliksik sa pag-aaral na ito ay deskriptibong paraan. Ang palarawang pananaliksik (Descriptive Method) ay mga kaganapan sa pag-aaral na ginamit ang palarawang pananaliksik ay kinapapalooban ng pagtatala, paglalarawan, pagpapakahulugan, pagsusuri at paghahambing. Layunin ng ganitong disenyo na sistematikong mailarawan ang sitwasyon at kundisyon nang makatotohanan at buong katiyakan.

Ayon kay McCombes (2019), ang deskriptibong pananaliksik ay naaangkop gamitin sa mga pag-aaral na may layunin na kilalanin ang mga katangian, kalimitan, kalakaran, ugnayan at kategorya.

Talahanayan 1

Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya Batay sa Pagsasalin

Mga Pahayag	Mean	SD	Puna
<i>Naisalin ang mga akda sa pinakapayak na paraan.</i>	4.78	0.42	Lubos na sumasang-ayon
<i>Naitala ang sapat na impormasyon para sa mabilis na pagkaunawaan.</i>	4.79	0.43	Lubos na sumasang-ayon
<i>Nabigyang buhay ang akdang Bisaya sa pamamagitan ng pagbabago ng midyum sa komunikasyon.</i>	4.69	0.46	Lubos na sumasang-ayon
<i>Nakabuo ng mas malinaw na imahe sa bawat paksa gamit ang KABISIG.</i>	4.81	0.43	Lubos na sumasang-ayon
<i>Nailagay ang mahahalagang datos na dapat nakalagay sa iba't ibang uri ng akda.</i>	4.71	0.47	Lubos na sumasang-ayon

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay naglalahad ng presentasyon, analisis, interpretasyon o pagpapakahulugan ng mga datos na nakalap ng mananaliksik. Ang mga ito ay iginawa ng talahanayan para sa mabilis na pagkakaunawa ng pananaliksik. Ang sumusunod na nakatalahanayang presentasyon at pagtalakay ay maglalapat ng ibayong karakterisasyon sa ng KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya. Matatagpuan din sa kabanatang ito ang interbensiyon na ginawa ng mananaliksik.

Ipapakita rin ang mga istatistikal na pamamaraan sa mga talahanayan na sumagot sa pananaliksik na KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya at Kaalaman sa Pagkatha ng tanaga.

Antas ng Kaalaman ng KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya

Sa pag-aaral na ito, sinuri sa malayang baryabol ang nilalaman ng kagamitang KABISIG, kung paanong makatutulong ang mga bahagi nito sa kakayahan ng mga mag-aaral sa proseso ng pagsulat. Ito ay patungkol sa sanayang aklat na naglalaman ng ilang akdang Bisaya gayundin ang ilang mga aktibidades bago at pagkatapos ng aralin.

Upang malaman ang antas ng kaalaman sa KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa pagsasalin, kasapatan, kaangkupan at disenyo; gumamit ang mananaliksik ng tseklis upang mangalap ng datos. Binigyang interpretasyon ang mga datos mula sa respondente sa pamamagitan ng paggamit ng Weighted Mean, Standard Deviation, at Literal na Paliwanag o Puna.

Isa sa masasabi nating salat pagdating sa edukasyon ay ang batayan at sanguniang aklat na naglalaman ng sapat at wastong impormasyon na may tamang paglalapat sa asignaturang Filipino. Hindi lahat ng mag-aaral sa nabiyayaan ng kakayahang magkaroon ng kagamitang pangteknolohiya kaya naman marami pa rin ang umaasa sa mga limbag na kagamitan.

Ang talahanayan 1 ay nagpapakita ng Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya Batay sa Pagsasalin.



Overall Mean: 4.75
Standard Deviation: 0.24
Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, nakabuo ng mas malinaw na imahe sa bawat paksa gamit ang KABISIG ay nakakuha ng (M=4.81, SD=0.43) at naitala ang sapat na impormasyon para sa mabilis na pagkaunawaan ay mayroong (M=4.79, SD=0.43). Bagaman napansin na lubhang mataas na antas ng ng kaalaman KABISIG, ang pahayag na may pinakamababang marka ay ang nabigyang buhay ang akdang Bisaya sa pamamagitan ng pagbabago ng midyum sa komunikasyon at mayroong (M = 4.69, SD = 0.46).

May kabuoang mean na 4.75, standard deviation na 0.24 at ipinapakita na ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Pagsasalin ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Makikita rito na sadyang positibo ang pinakitang resulta ng tagatugon hinggil sa kung paano ang performans ng kabisig batay sa pagsasalin. Sinabi rin na ang pagsasalin ay kailangan na nakabatay sa lipunang pinagmulan. Ang pagsasalin rin ay ang gawain ng pagpapaunawa ng mga kahulugan ng panitik at ng kinalabasang paglikha ng katumbas na teksto na tinatawag na salinwika na naghahatid ng kaparehong mensahe na nasa ibang wika. Batay sa lumabas dito, kapansin pansin ang ipinamalas na potensyal na KABISIG na posibleng maging isa intruksiyunal na kagamitang makatutulong sa bawat isa na posibleng magpataas ng antas ng kaalaman.

Ang talahanayan 2 ay nagpapakita ng Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Kasapatan.

Talahanayan 2

Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Kasapatan

Mga Pahayag	Mean	SD	Puna
<i>Sapat ang kabuuang pahina upang mailahad ang mga impormasyon.</i>	4.77	0.45	Lubos na sumasang-ayon
<i>Husto't walang kakulangan ang nilalaman ng bawat akda.</i>	4.84	0.36	Lubos na sumasang-ayon
<i>Sagana ang bilang ng mga salita sa pagkatuto ng bukabularyo.</i>	4.71	0.47	Lubos na sumasang-ayon
<i>Mainam ang mga nabuong gabay na tanong para maunawaan ng mga mag-aaral ang partikular na akda.</i>	4.72	0.46	Lubos na sumasang-ayon
<i>Nakaayon ang pinaghanguang aklat para magkaroon ng makabuluhang awtput.</i>	4.80	0.42	Lubos na sumasang-ayon

Overall Mean: 4.77
Standard Deviation: 0.24
Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Husto't walang kakulangan ang nilalaman ng bawat akda ay nakakuha ng (M=4.84, SD=0.36). Bagaman napansin na lubhang mataas na antas ng ng kaalaman KABISIG, ang pahayag na may pinakamababang marka ay ang Sagana ang bilang ng mga salita sa pagkatuto ng bukabularyo at mayroong (M = 4.71, SD = 0.47).

May kabuoang mean na 4.77, standard deviation na 0.24 at ipinapakita na ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa kasapatan ay may puna na lubos na sumasang-ayon at literal na paliwanag

na lubhang mataas.

Mapapansin na lubos na naiintihan at naayon ang salin sa panlasa ng mga kabataan kung kaya't positibo ang nagging hatol dito ng mga ebalweytor maging sagot rin sa talatanungan ng mga mag-aaral sa ikapitong baitang.

Ang talahanayan 3 ay nagpapakita ng Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Kaangkupan.



Talananayan 3

Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Kaangkupan

Mga Pahayag	Mean	SD	Puna
<i>Angkop ang mga salita para sa mga mag-aaral sa ikapitong baitang.</i>	4.75	0.44	Lubos na sumasang-ayon
<i>Apropyado ang nilalaman sa interes ng mga mag aaral.</i>	4.75	0.44	Lubos na sumasang-ayon
<i>Tama ang bilang ng mga aktibiti sa bawat paksa.</i>	4.81	0.41	Lubos na sumasang-ayon
<i>Akma ang pagpili ng haba ng mga akdang nakalagay</i>	4.75	0.45	Lubos na sumasang-ayon
<i>Matwid ang paunang gawain bago magsimula ang talakayan</i>	4.63	0.48	Lubos na sumasang-ayon

Overall Mean: 4.74

Standard Deviation: 0.22

Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Tama ang bilang ng mga aktibiti sa bawat paksa ay nakakuha ng (M=4.81, SD=0.41), Angkop ang mga salita para sa mga mag-aaral sa ikapitong baitang, Apropyado ang nilalaman sa interes ng mga mag aaral, at Akma ang pagpili ng haba ng mga akdang nakalagay ay mayroong (M=4.75, SD=0.45). Bagaman napansin na lubhang mataas na antas ng ng kaalaman KABISIG, ang pahayag na may pinakamababang marka ay ang Matwid ang paunang gawain bago magsimula ang talakayan at mayroong (M = 4.63, SD = 0.48).

May kabuoang mean na 4.74, standard deviation na 0.22 at ipinapakita na ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Kaangkupan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Mas mabilis nilang nalalaman ang mga paksa kung ito ay nakasalin sa kumportableng diyalektong tutulong sa kanila upang madebelop ang kanilang

karunungan sa pagtuklas ng mga akda lalo't higit, mula dito sa Pilipinas.

Nangangahulugan ito na dapat mabatay ang pagbuo ng sanayang aklat sa mga teorya at simulain ng wika na kagaya ng kahalagahan ng wika, papel na ginagampanan nito sa lipunan ng mga tao, mga uri at antas ng gamit nito at mga pagbabago sa mga katangian nito samantalang nagbabago rin ang lipunang gumagamit at pakikisama sa kapwa. Mas mabilis nilang nalalaman ang mga paksa kung ito ay nakasalin sa kumportableng diyalektong tutulong sa kanila upang madebelop ang kanilang karunungan sa pagtuklas ng mga akda lalo't higit, mula dito sa Pilipinas.

Ang talananayan 4 ay nagpapakita ng Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Disenyo.

Talananayan 4

Antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Disenyo

Mga Pahayag	Mean	SD	Puna
<i>Nakapupukaw ng atensyon ang kabuuang kulay ng KABISIG.</i>	4.62	0.49	Lubos na sumasang-ayon
<i>Nagkaroon ng pagbabago sa font ng mga salitang binibigyang diin.</i>	4.69	0.46	Lubos na sumasang-ayon
<i>Naaayon ang disenyo ng bawat pahina sa bawat paksang pinag-uusapan</i>	4.65	0.49	Lubos na sumasang-ayon
<i>Naibigay ang tamang sukat ng sunayang-aklat na ayon sa pangangailangan ng mag-aaral.</i>	4.67	0.50	Lubos na sumasang-ayon
<i>Nakasisiguradong matibay ang pagkakatagawa ng KABISIG at magagamit sa iba't ibang panahon.</i>	4.69	0.46	Lubos na sumasang-ayon

Overall Mean: 4.66

Standard Deviation: 0.26

Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Nagkaroon ng pagbabago sa font ng mga salitang binibigyang diin at Nakasisiguradong matibay ang pagkakatagawa ng KABISIG at magagamit sa iba't ibang panahon ay nakakuha ng (M=4.69, SD=0.46), Naibigay ang tamang sukat ng sunayang-aklat na ayon sa pangangailangan ng

mag-aaral ay mayroong (M=4.67, SD=0.50).

May kabuoang mean na 4.66, standard deviation na 0.26 at ipinapakita na ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Disenyo ay may puna na lubos na sumasang-ayon at literal na paliwanag



na lubhang mataas. Sa bahaging ito pinatutunayan na nakakatawag din ng pansin ang disenyo upang maging kaakit-akit sa mga mambabasa o gagamitin ng kagamitan batay sa tugon ng respondente. Mahalaga na nabibigyan din ng pokus ang paggawa ng disenyo sapagkat isa ito sa paraan upang makuha ang interes ng nagbabasa.

Antas ng Kaalaman sa Pagkatha ng Tanaga

Sa pag-aaral na ito, sinuri sa malayang baryabol ang kaalaman sa pagkatha ng tanaga, kung paanong makatutulong ang mga bahagi nito sa kakayahan ng mga mag-aaral sa proseso ng pagsulat. Ito ay patungkol sa sanayang aklat na naglalaman ng ilang akdang Bisaya gayundin ang ilang mga aktibidades bago at pagkatapos ng aralin.

Upang malaman ang antas ng kaalaman sa pagkatha ng tanaga

batay sa kawastuhan, kaisahan, tema at estilo; gumamit ang mananaliksik ng tseklis upang mangalap ng datos. Binigyang interpretasyon ang mga datos mula sa respondente sa pamamagitan ng paggamit ng Weighted Mean, Standard Deviation, at Literal na Paliwanag o Puna.

Marami sa mga mag-aaral dulot ng pandemya ang naapektuhan sa sinasabing bagong normal. Kaisa nito ay ang kapansin-pansing hirap sa pagitan ng bata at mga guro. Sa usaping ito higit na tinatalakay ang lebel ng pagsulat ng mga mag-aaral sa tanaga – isang uri ng tula sa espesifikong larangan na magtatakda ng kahusayan ng mga estudyante sa usaping paghabi ng salita.

Ang talahanayan 5 ay nagpapakita ng Antas ng kaalaman sa pagkatha ng tanaga batay sa Kawastuhan.

Talahanayan 5
Antas ng kaalaman sa pagkatha ng tanaga batay sa Kawastuhan

Mga Pahayag	Mean	SD	Puna
<i>Angkop ang KABISIG para sa mga salitang nakapaloob sa tanaga.</i>	4.58	0.49	Lubos na sumasang-ayon
<i>Apropyado ang paksa sa sanayang-aklat sa layunin ng tanaga.</i>	4.63	0.50	Lubos na sumasang-ayon
<i>Tama ang bilang ng pantig sa bawat saknong sa tulong ng KABISIG.</i>	4.62	0.49	Lubos na sumasang-ayon
<i>Akma ang bokabularyo sa pagsulat ng tanaga.</i>	4.70	0.49	Lubos na sumasang-ayon
<i>Matwid at walang ligoy ang mga paksa kaya't higit na kakikitaan ng pagkatuto sa pamamagitan ng tanaga.</i>	4.68	0.47	Lubos na sumasang-ayon

Overall Mean: 4.64

Standard Deviation: 0.27

Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Akma ang bokabularyo sa pagsulat ng tanaga. ay nakakuha ng (M=4.70, SD=0.49) at Matwid at walang ligoy ang mga paksa kaya't higit na kakikitaan ng pagkatuto sa pamamagitan ng tanaga.

May kabuoang mean na 4.64, standard deviation na 0.27 at ipinapakita na ang antas ng kaalaman KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya batay sa Kawastuhan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa pagkakaroon ng kawastuhan ng pagsulat ang mekaniks ay paggamit ng wastong pagbabaybay, kapitalisasyon, pagbabantas, pagpapantig ng mga salita at iba pa, dapat isa-isip na ang maayos na pagkakasulat ng isang sulatin ay isang kailanganin na dapat isaalang-alang sa pagsulat (Almario, 2014). Ipinapakita na ang lebel ng kaalaman sa pagkatha ng tanaga batay sa kawastuhan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang talahanayan 6 ay nagpapakita ng Antas ng Kaalaman sa Pagkatha ng Tanaga Batay sa Kaisahan.

Talahanayan 6
Antas ng kaalaman sa pagkatha ng tanaga batay sa Kaisahan

Mga Pahayag	Mean	SD	Puna
<i>Nalinang ang kasanayan na umunawa ng paksa patungkol sa tanaga gamit ang KABISIG</i>	4.70	0.47	Lubos na sumasang-ayon
<i>Mabilis na natukoy bantas at ilan pang usaping pambalarila sa tulong ng KABISIG.</i>	4.70	0.46	Lubos na sumasang-ayon
<i>Napalalim ang kaalamang dapat taglayin sa akdang Bisaya at paglalapat nito sa tanaga.</i>	4.73	0.46	Lubos na sumasang-ayon
<i>Napabilis ang paglikha ng tanaga sapagkat nakaayon ito sa pangangailangang pangkaisipan alinsunod sa pangangailan sa pagkatuto ng akdang Bisaya.</i>	4.69	0.48	Lubos na sumasang-ayon
<i>Napalutang ang singkronisasyon sa pagitan ng sanayang-aklat at tanaga.</i>	4.70	0.47	Lubos na sumasang-ayon



Overall Mean: 4.70
Standard Deviation: 0.27
Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Napalalim ang kaalamang dapat taglayin sa akdang Bisaya at paglalapat nito sa tanaga ay nakakuha ng (M=4.73, SD=0.46), Nalinang ang kasanayan na umunawa ng paksa patungkol sa tanaga gamit ang KABISIG,

Mabilis na natukoy bantas at ilan pang usaping pambalarila sa tulong ng KABISIG, at Napalutang ang singkronisasyon sa pagitan ng sanayang-aklat at tanaga ay mayroong (M=4.70, SD=0.47). Bagaman napansin na lubhang mataas na antas ng ng kaalaman KABISIG, ang pahayag na may pinakamababang marka ay ang Napabilis ang paglikha ng tanaga sapagkat nakaayon ito sa pangangailangang pangkaisipan alinsunod sa pangangailan sa pagkatuto ng akdang Bisaya at mayroong (M = 4.69, SD = 0.48).

Ipinapakita na ang lebel ng kaalaman sa pagkatha ng tanaga batay sa kaisahan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Ipinapahiwatig nito na tama ang giniamit na mga salita na nagpatibay sa kung paano magiging makabuluhan ang paggamit ng sanayang aklat at nararapat ang mga salita na kataala sa nilalaman ng KABISIG kung kaya't nagkaroon ito ng positibong tugon at maayos na pidbak sa mga respondente at mga kaguruang nagsagawa ng balidasyon sa materyales na ito. Ipinapakita na ang lebel ng kaalaman sa pagkatha ng tanaga batay sa kawastuhan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang talahanayan 7 ay nagpapakita ng Antas ng Kaalaman sa Pagkatha ng Tanaga Batay sa Kaisahan.

Talahanayan 7
Antas ng kaalaman sa pagkatha ng tanaga batay sa Tema

Mga Pahayag	Mean	SD	Puna
<i>Naibigay ang kaisipang hatid ng KABISIG tungo sa tanaga.</i>	4.64	0.50	Lubos na sumasang-ayon
<i>Nakita ang interes sa bokabularyong Bisaya sa pagkatha ng obra.</i>	4.73	0.44	Lubos na sumasang-ayon
<i>Nailalapat ang nais na kalabasang tema na nakapaloob sa tanaga.</i>	4.75	0.43	Lubos na sumasang-ayon
<i>Mabilis na nakapagpapahayag ng punto de vista sa paglikha ng tula.</i>	4.76	0.44	Lubos na sumasang-ayon
<i>Nalinang ang kakahayang magpalabas ng nais sabihin na nagsilbing tulay ang tanaga upang maihatid ang mensahe.</i>	4.72	0.46	Lubos na sumasang-ayon

Overall Mean: 4.72
Standard Deviation: 0.25
Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Mabilis na nakapagpapahayag ng punto de vista sa paglikha ng tula ay nakakuha ng (M=4.76, SD=0.44), Nailalapat ang nais na kalabasang tema na nakapaloob sa tanaga ay mayroong (M=4.75, SD=0.43). Bagaman napansin na lubhang mataas na antas ng ng kaalaman KABISIG, ang pahayag na may pinakamababang marka ay ang Naibigay ang kaisipang hatid ng KABISIG tungo sa tanaga at

mayroong (M = 4.64, SD = 0.50).

May kabuoang mean na 4.72, standard deviation na 0.25 at ipinapakita na ang lebel ng kaalaman sa pagkatha ng tanaga batay sa tema ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang talahanayan 8 ay nagpapakita ng Antas ng Kaalaman sa Pagkatha ng Tanaga Batay sa Kaisahan.

Talahanayan 8
Antas ng kaalaman sa pagkatha ng tanaga batay sa Estilo

Mga Pahayag	Mean	SD	Puna
<i>Nabigyang pansin ang iba't ibang estilo ng pagsulat.</i>	4.74	0.44	Lubos na sumasang-ayon
<i>Nakagawa ng di palasak na tanaga.</i>	4.72	0.45	Lubos na sumasang-ayon
<i>Nakayari ng awitput batay sa kani-kaniyang panlasa.</i>	4.67	0.49	Lubos na sumasang-ayon
<i>Nakapaglahad ng sariling paraan sa pagtula sa tulong ng KABISIG.</i>	4.68	0.48	Lubos na sumasang-ayon
<i>Nakagamit ng estilong ginamitan ng mga salitang di tukoy ng karamihan.</i>	4.80	0.42	Lubos na sumasang-ayon

Overall Mean: 4.72
Standard Deviation: 0.25
Literal na paliwanag: Lubhang Mataas

Sa lubhang mataas na antas ng ng kaalaman KABISIG at sa pananaw ng mga tagatugon, Nakagamit ng estilong ginamitan

ng mga salitang di tukoy ng karamihan ay nakakuha ng (M=4.80, SD=0.42), Nabigyang pansin ang iba't ibang estilo ng



pagsulat ay mayroong ($M=4.74$, $SD=0.44$). Bagaman napansin na lubhang mataas na antas ng ng kaalaman KABISIG, ang pahayag na may pinakamababang marka ay ang Nakapaglahad ng sariling paraan sa pagtula sa tulong ng KABISIG at mayroong ($M = 4.68$, $SD = 0.48$).

May kabuoang mean na 4.72, standard deviation na 0.25 at ipinapakita na ang lebel ng kaalaman sa pagkatha ng tanaga batay sa tema ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Mababakas na maraming naenganyo ang mga batang tumuklas ng mga bago at sarili nilang estilo sa pagsulat ng tanaga. Ipinapalabas dito ang kanilang pagiging interesadong magbahagi ng kakayanan at karunungan gamit ang kanilang kani-kaniyang talino.

Gayunpaman, ang Estilo ay nag-iisa kung saan ang huli ay maghuhukom ng isang mahusay na gawain, para sa isang ang may-akda ay walang tunay na sarili kundi ang estilo, katotohanan, siyentipikong pagtuklas, at lahat ng uri ng impormasyon, ay maaaring makuha sa pamamagitan ng lahat,

ngunit ang pagsulat ng may -akda ay hindi maaaring makuha mula sa kanya.

Antas ng Kabisaan sa Kagamitang Instruksiyunal sa Asignaturang Filipino

Sa pag-aaral na ito, sinuri sa di-malayang baryabol ang kabisaan sa kagamitang instruksiyunal sa asignaturang Filipino batay sa rasyunal na pagsulat, kung paanong makatutulong ang mga bahagi nito sa kakayahan ng mga mag-aaral sa proseso ng pagsulat. Ito ay patungkol sa sanayang aklat na naglalaman ng ilang akdang Bisaya gayundin ang ilang mga aktibidades bago at pagkatapos ng aralin.

Binigyang interpretasyon ang mga datos mula sa respondente sa pamamagitan ng paggamit ng Weighted Mean, Standard Deviation, at Literal na Paliwanag o Puna.

Ang talahanayan 9 ay nagpapakita ng Antas ng Kabisaan sa Kagamitang Instruksiyunal sa Asignaturang Filipino Batay sa Rasyunal na Pagsulat.

Talahanayan 9

Antas ng Kabisaan sa Kagamitang Instruksiyunal sa Asignaturang Filipino Batay sa Rasyunal na Pagsulat

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
26 - 30	124	80.51	Pinakamahusay
21 - 25	30	19.49	Higit na Mahusay
16 - 20	0	31.67	Mahusay
11 - 15	0	0.80	Di Gaanong Mahusay
6 - 10	0	0.00	Di Mahusay
0 - 5	0	0.00	Walang Kahusayan
Total	154	100	
Weighted Mean	26.84		
Pinakamababang Marka	21		
Pinakamataas na marka	30		Higit na Mahusay
Standard Deviation	2.14		

Talahanayan bilang siyam ay nagpapakita ng antas ng kabisaan sa kagamitang instruksiyunal sa asignaturang filipino batay sa Rasyunal na pagsulat, sa kabuoang isang daan at limampung-dalawang tagatugon, ang marka na “26 - 30” ay nakakuha ng pinakamataas na bilang na isang daan at dalawampung-apat (124) o 80.51% ng kabuoang tumugon at may mapaglarawang katumbas na Dalubhasa. Habang ang marka na “21 - 25” ay nakakuha ng pinakamababang bilang na tatlumpu (30) o 19.49% ng kabuoang tumugon at may mapaglarawang katumbas na Malapit at halos pumantay sa Dalubhasa.

May kabuoang (Weighted Mean = 26.84, SD = 2.14) at (pinakamababang marka = 21, pinakamataas na marka = 30) ipinapakita na ang antas ng kabisaan sa kagamitang instruksiyunal sa asignaturang filipino batay sa Rasyunal na pagsulat ay may mapaglarawang katumbas na Dalubhasa at may literal na paliwanag na Napakakasiya-siya. Ipinapahiwatig nito na tama at wasto ang pagkakagawa dito na nagpatibay sa kung paano magiging makabuluhan ang paggamit ng sanayang aklat at nararapat ang mga salita na katala sa nilalaman ng KABISIG kung kaya’t nagkaroon ito ng positibong tugon at

maayos na pidbak sa mga respondente at mga kaguruang nagsagawa ng balidasyon sa materyales na ito.

Mapapansin na di lamang nakasalalay sa guro ang pagtaas ng performans o pagbaba ng mga mag-aaral bagkus maari din sa kakayahan ng mag-aaral.

Epekto ng KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya sa Kabisaan ng Kagamitang Instruksiyunal

Sa pag-aaral na ito, tampok ang sanayang aklat na naglalaman Epekto ng KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya sa Kabisaan ng Kagamitang Instruksiyunal. Binigyang interpretasyon ang mga datos mula sa respondente sa pamamagitan ng paggamit ng R-squared, Adjusted R-squared, Standard Error at F-test.

Ang talahanayan 10 ay nagpapakita ng Epekto ng KABISIG: Kaalaman sa Pagkatha ng Tanaga sa Kabisaan ng Kagamitang Instruksiyunal sa pamamagitan ng talahanayan sa ibaba.



Talahanayan 10

Makabuluhang Epekto ng KABISIG: Kaalaman sa Pagkatha ng Tanaga sa Kabisaan ng Kagamitang Instruksyunal

Rasyunal na pagsulat	B	SE	β	t	p
Constant	30.06	4.652		6.462*	.000
Pagsasalin		.874	.097	.111	.911
Kasapatan		.826	-.659	-.798	.426
Kaangkupan		.941	.571	.607	.545
Disenyo		.851	-.695	-.816	.416
R-squared			.012		
Adjusted R-squared			-.015		
Standard Error of the Estimate		2.155			
F(4, 149)				.437	.782

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng multiple regression analysis sa pagsusuri ng epekto ng KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya sa kabisaan sa kagamitang instruksyunal sa asignaturang filipino batay sa Rasyunal na pagsulat. Ang regression model ay nagpapaliwanag ng 1.2% ng variance sa pagganap ng mga mag-aaral (R-squared = 0.012). Ang Pagsasalin, Kasapatan, Kaangkupan, at Disenyo ng Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya ay walang positibong epekto sa Rasyunal na pagsulat. Ang F-test ng lahat ng modelo ay hindi makabuluhan (F (4, 149) p > 0.05), nagpapahiwatig na ang regression model ay hindi tugma sa mga datos. Ang standard error of the estimate, na sumasalamin sa average deviation sa pagitan ng sinusunod at hinulaan na rasyunal na pagsulat.

Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto ng KABISIG sa Rasyunal na pagsulat at

0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto ng KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya sa kabisaan sa kagamitang instruksyunal sa asignaturang filipino batay sa Rasyunal na pagsulat” ay tanggapin, ipinapakita nito na walang epekto sa pagitan nila.

Sa paggamit ng teknolohiya nakapokus din ito a pagkatuto ng mag-aaral kung ano ang material nilang gagamitin, maaring pagsagot ng mga takdang-aralin, pagkuha ng impormasyon sa pagsulat ng isang akda gaya ng pasulat ng sanaysay, tula at iba pang akda.

Ang talahanayan 11 ay nagpapakita ng Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya at Kaalaman sa Pagkatha ng Tanaga.

Talahanayan 11

KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya at Kaalaman sa Pagkatha ng Tanaga

Rasyunal na pagsulat	B	SE	β	t	p
Constant	31.26	4.221		7.406*	.000
Kawastuhan		.872	-.526	-.603	.547
Kaisahan		.739	.424	.574	.567
Tema		.849	-.915	-1.078	.283
Estilo		.821	.075	.091	.927
R-squared			.018		
Adjusted R-squared			-.008		
Standard Error of the Estimate		2.274			
F(5, 180)				.489	.784

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng multiple regression analysis sa pagsusuri ng epekto ng KABISIG sa kaalaman sa pagkatha ng tanaga sa kabisaan sa kagamitang instruksyunal sa asignaturang filipino batay sa Rasyunal na pagsulat. Ang regression model ay nagpapaliwanag ng 1.8% ng variance sa pagganap ng mga mag-aaral (R-squared = 0.018). Ang Kawastuhan, Kaisahan, Tema, at Estilo ng sa pagkatha ng tanaga ay walang positibong epekto sa Rasyunal na pagsulat. Ang F-test ng lahat ng modelo ay hindi makabuluhan (F (4, 149) p > 0.05).

Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto ng KABISIG sa Rasyunal na pagsulat at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto ng KABISIG sa kaalaman sa pagkatha ng tanaga sa kagamitang instruksyunal

sa asignaturang filipino batay sa Rasyunal na pagsulat” ay tanggapin, ipinapakita nito na walang epekto sa pagitan nila.

Makikita na alinsunod sa tinuran ni Lazaro, walang tugma at sapat na ugnayan ang materyales na ito sa kakayanan ng mga mag-aaral sapagkat nakita na mataas ang puntos sa sarbey ngunit hindi tugma sa performans na kanilang ginawa sa pamamagitan ng pagsulat ng tanaga.

Programang upang mapaunlad ang Kagamitang Pampagtuturo na KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya

Ang Talahanayan 12 ay nagpapakita ng nabuong Programa upang mapaunlad ang Kagamitang Pampagtuturo na KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya.



Talananayan 12
Programa Upang Mapaunlad ang Kagamitang Pampagtuturo na KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya

Layunin	Istratehiya/ Aktibiti	Mga Kasangkot	Inaasahang Awtput
Matalakay ang ilang akdang bisaya	Magbigay ng talaan ng akdang Bisaya na maaari nilang pagtuunan ng pansin sa ikalawang markahan	Punongguro at Mga Guro sa Filipino	Maibigay ang layuning malaman ang ilang akdang pampanitikan.
Malaman ang antas ng kaalaman sa pagkatha ng tanaga	Magbigay ng pamantayan at kaalaman sa kung paano bumuo ng tanaga	Mga mag-aaral sa ika-7 baitang at mga guro sa Filipino	Mabigyang pansin ang mga mag-aaral na makakakuha ng mababang marka
Mapataas ang antas ng mga mag-aaral sa paggamit ng kagamitang pampagkatuto patungkol sa akdang bisaya	Iimplementa ang paggamit ng KABISIG bilang sanayang aklat	Mga Guro sa Filipino at mag-aaral sa ika-7 baitang	Tumaas ang kaalaman ng mga mag-aaral at mabigyang tuon sa akdang Bisaya na hindi nabibigyang halaga

Ang programang interbensiyon ay isang gawain upang makatulong sa mga mag-aaral na mapaunlad ang kanilang pagganap sa akademik. Ito ay pagbibigay ng mga aktibiti o gawain na nilalayong mapabuti ang kasanayan sa pag-aaral at pangkalahatang pag-unlad ng mga mag-aaral.

Sa pananaliksik na ginawa ng mananaliksik ay makikitang walang makabuluhang epekto KABISIG: Sanayang Aklat sa Pagtuklas ng Ilang Akdang Bisaya at Kaalaman sa Pagkatha ng Tanaga.

Karamihan sa kanila ay naglalaro lamang sa average na iskor. Makikita dito na kaya nilang umunawa ngunit nahihirapan silang bumuo. Kumbaga sa Bloom's taxonomy ay naipit sila sa understanding kaya nahihirapan sa creating lalo't creating ang pinakamataas na lebel at mapapansin na dahil pa rin sa pandemic ay hindi nahasa ang kanilang kakayahan sa usaping ito.

Ngunit hindi ito nangangahulugan na hindi pwedeng magamit ang sanayang aklat sa pagkatuto dahil ayon masusing pagsisiyasat at pagdaan sa balidasyon, ipakinapakita na makatutulong ito sa mabilis na pagkaunawa. Sa usapin naman na pagbuo ng tanaga, matataas ang ibinigay na puntos ng mga mag-aaral sa talatanungan ngunit hindi umayon sa nakuha nilang marka sa rasyunal na pasulat.

4. KONKLUSYON AT REKOMENDASYON

Sa pamamagitan ng mga inilahad na kinalabasan, ang konklusyon na ito ay nabuo:

“Walang makabuluhang epekto ng KABISIG: Sanayang-aklat sa Pagkatuto ng Ilang Akdang Bisaya at Kaalaman sa Pagkatha ng Tanaga” kaya’t ang haypotesis sa unang kabanata ay dapat tanggapin, nagpapakita ito na hindi nagkaroon ng epekto ang KABISIG: Sanayang-aklat sa Pagkatuto ng Ilang Akdang Bisaya at kaalaman sa pagkatha ng tanaga. Ngunit hindi ito nangangahulugan na hindi pwedeng magamit ang sanayang aklat sa pagkatuto dahil ayon masusing pagsisiyasat at pagdaan sa balidasyon, ipakinapakita na makatutulong ito sa mabilis na pagkaunawa. Sa usapin naman na pagbuo ng tanaga, matataas ang ibinigay na puntos ng mga mag-aaral sa talatanungan ngunit hindi umayon sa nakuha nilang marka sa rasyunal na pasulat. Karamihan sa kanila ay naglalaro lamang sa average na iskor. Makikita dito na kaya nilang umunawa

ngunit nahihirapan silang bumuo. Kumbaga sa Bloom's taxonomy ay naipit sila sa understanding kaya nahihirapan sa creating lalo't creating ang pinakamataas na lebel at mapapansin na dahil pa rin sa pandemic ay hindi nahasa ang kanilang kakayahan sa usaping ito.

Matapos ang pag-aaral at pagsusuri ng mga natuklasan, iminumungkahi ng mananaliksik ang mga sumusunod;

1. Gamitin ang materyal bilang kagamitan sa pagtuturo ng mga aralin sa Filipino sa ikalawang markahan na kung saan ito ay nakatuon sa akdang Bisaya. Magiging kapaki-pakinabang ang KABISIG bilang supplementary kagamitan lalo't isa sa suliranin ng mga guro sa Filipino ay ang makabagong aklat sa pagtuturo.
2. I-endorso ang KABISIG bilang kagamitan sa pagkatuto sapagkat mas magaan ito kumpara sa tipikal na aklat at mas payak ang mga salitang ginamit sa pagsasalain na susi sa mabilis na pagkaunawa.
3. Hikayatin ang mga magulang na mahimok ang kanilang mga anak na gamitin ang KABISIG dahil batid natin na karamihan sa mga magulang sa panahon ngayon ay mula sa parting kabisayaan. Dahil dito, magiging bukas ang mga anak sa iba't ibang salita na ginagamit ng mga magulang na daan sa mabungang komunikasyon.

TALASANGGUNIAN:

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HOME-SCHOOL LINK AS A SUPPLEMENTARY LEARNING MATERIAL ON THE STUDENTS' MOTIVATION AND PERFORMANCE IN MATHEMATICS

Lowie Domasian Gaceta

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The main purpose of the study was to determine the effect of the Home-School Link as a supplementary material on the students' motivation and performance in mathematics. This study aims to assess the extent of the Home-School Link as a supplementary learning material relative to its components; characteristics; students' motivation; and performance in mathematics. The research also explores into investigating notable disparities in students' performance in mathematics. Furthermore, the study also finds the effect of the Home-School Link as a supplementary learning material on the students' motivation and performance in mathematics.

The study employed descriptive research to assess the influence of Home-School Link as a supplementary learning material on students' motivation and performance in mathematics. Purposive sampling technique was used to 101 Grade 10 students at Pedro Guevara Memorial National High School. Descriptive and inferential statistics, including weighted mean, standard deviation, and T-test.

The objectives, key concept, example, assessment, design, clarity, appropriateness and usefulness as components and characteristics of the Home-School Link were very highly validated. Furthermore, the level of students' motivation in terms of interest and positive attitude was very high, while high in terms of goal clarity and focus and productivity. A notable difference in students' performance in mathematics between the formative and summative test was observed. Lastly, the Home-School Link as a supplementary learning material was found to be very effective on students' motivation and performance in mathematics.

A significant difference in students' performance in mathematics between the formative and summative test was noted. Thus, the null hypothesis is rejected. Significant effect of the use of the Home-School Link as a supplementary learning material on students' motivation was observed, denoted by rejecting the null hypothesis. Lastly, a significant effect of the use of the Home-School Link as a supplementary learning material on students' mathematics performance in summative test was observed. Thus, the hypothesis is rejected.

Based on these results, it was recommended that Mathematics teachers may integrate the use of Home-School Link into their discussion of mathematics concepts that will support the needs of students to have mastery of the topic and boost their self-confidence to participate. Mathematics teachers are encouraged to develop more Home-School Link Material in different topics not only in second quarter topics but in other fields of Mathematics.

KEYWORDS: Home-School Link; supplementary material; students' motivation

1. INTRODUCTION

The Department of Education (DepEd) worked collaboratively with other agencies to uplift the morale of teachers, parents, and students. This policy was stipulated in the Constitutional Right of All Citizens to Quality Education authored by Senator Manny Villar in 2010. Senate Bill No. 75, an act ensuring the full realization of the Constitutional Right of All Citizens to Quality Education ordained for "A No Filipino Child Left Behind Act of 2010". In section 2, it was declared a policy of the State to protect and promote the right of the citizens to quality education and to take appropriate steps to make such education accessible to all.

Teachers use a wide range of stimulating materials to teach the concepts outlined in the curriculum. The uses of these learning materials contribute to active involvement in the classroom participation. One of the ways to help the learners achieve success in learning is through giving support aids made by the teachers to understand and apply learning in their daily life with the use of supplementary learning materials (Ayado, et. al, 2022). It also helps the learners to unlock their difficulties in a certain topic.

Supplementary learning materials are the instruments a teacher uses to deliver lessons. Each teacher requires a range of tools to draw upon to assist and support student's learning. These materials play a large role in making knowledge accessible to learners which can encourage them to engage in different ways.

Instructional and supplementary learning materials were modified just to make the lessons easier by following the MELC prescribed by the Department of Education. These teacher-made supplementary learning materials motivated learners and maintained an interest in the field of Mathematics. Teaching-learning experiences by both teachers and students resulted in personalized instructional material one of which was the Home-School Link Supplementary Learning Materials.

In this study, the researcher wants to determine the effectiveness of the teacher-made supplementary learning material called Home-School Link on the performance of Grade 10 students in Mathematics. The material was administered to Grade 10 students who obtained low MPS of the second quarter pre-assessment during school year 2023 - 2024.



1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the level of the Home-School Link's components in terms of:
 - 1.1 Objectives;
 - 1.2 Key Concept;
 - 1.3 Examples; and
 - 1.4 Assessment?
2. What is the level of the Home-School Link's characteristics in terms of:
 - 2.1 Design;
 - 2.2 Clarity;
 - 2.3 Appropriateness; and
 - 2.4 Usefulness?
3. What is the level of Students' Motivation in terms of:
 - 3.1 Interest;
 - 3.2 Goal Clarity;
 - 3.3 Focus and Productivity; and
 - 3.4 Positive Attitude?
4. What is the level of Students' Performance in Mathematics in terms of:
 - 4.1 Formative Test; and
 - 4.2 Summative Test?
5. Is there a significant difference on the students' performance in Mathematics in terms of formative test and summative test with the use of Home-School Link?
6. Is there a significant effect of the use of the Home-School Link on students' motivation?
7. Is there a significant effect of the use of Home-School Link on students' performance in mathematics in terms of summative test?

2. METHODOLOGY

The research design used in this was descriptive method which describes a population, situation, or phenomenon that is being studied. It focuses on answering the how, what, when, and where questions. If a research problem, rather than the why. This method was used to describe the components and characteristics of what was being studied. Hence, this type of research design is an applicable way to determine if the

developed Home-School Link, a supplementary learning material in teaching Mathematics 10 will be evaluated.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation of the data gathered based on the research questions, the analysis and interpretation relative to the sub problem and hypotheses stated in chapter 1.

The major findings included were the level of validation of Home-School Link as a supplementary learning material on students' motivation and performance in mathematics.

Level of the Home-School Link's Components

In this study, the major findings for the level of the Home-School Link's components in terms of objectives, key concept, examples and assessment were shown below.

The following tables show the statements, mean, weighted mean, standard deviation, remarks, and verbal interpretation. Table 1 illustrates the level of the Home-School Link's in terms of objectives. The statements, mean, standard deviation, remarks and verbal interpretation were presented.

The objectives are aligned with the Most Learning Competencies in DepEd Curriculum. The mean (M = 4.82) shows a very high level of validity in terms of objectives. Similarly, it describes a direction for the student acquiring new knowledge, skills, and attitudes. Gaining a slightly lower mean (M = 4.32), it still indicates a strong agreement of the teachers on the validity of learning materials component with regards to its objectives.

The level of the Home-School Link's components in terms of objectives gained a weighted mean score of 4.60 and a standard deviation of 0.68 and was verbally interpreted as *very high* among the respondents. This implies that the crafted objectives as part of the learning material hit the targeted goal of this study.

Table 1 Level of the Home-School Link's Components in terms of Objectives

STATEMENT	MEAN	SD	REMARKS
Each lesson in the Home-School Link is accompanied by specific objectives	4.73	0.54	Strongly Agree
The objectives are well planned, formulated and organized.	4.50	0.78	Strongly Agree
The objectives are measurable and attainable.	4.64	0.57	Strongly Agree
The objectives are aligned with the Most Learning Competencies in Deped Curriculum.	4.82	0.49	Strongly Agree
The objectives describe a direction for the student acquiring new knowledge, skills, and attitudes.	4.32	0.82	Strongly Agree
Weighted Mean		4.60	
SD		0.68	
Verbal Interpretation		Very High	

The components' goals are tailored to each class, meticulously thought out, written, and arranged, quantifiable, and reachable. They also correspond with the majority of the learning

competencies in the DepEd curriculum and help students gain new abilities, perspectives, and information.



Table 2 Level of the Home-School Link's Components in terms of Key Concept

STATEMENT	MEAN	SD	REMARKS
The Home-School Link reflects the most important aspect of what is being taught as provided by MELC.	4.50	0.84	Strongly Agree
The content of each lesson is directly relevant to the defined objectives.	4.59	0.58	Strongly Agree
The key concepts show the definition of terms related to the topics.	4.68	0.70	Strongly Agree
The topics are supported by examples and suited to the level of the students.	4.55	0.84	Strongly Agree
Each topic is given emphasis in the lesson.	4.55	0.84	Strongly Agree
Weighted Mean		4.57	
SD		0.77	
Verbal Interpretation		Very High	

Table 2 illustrates the level of the Home-School Link's components in terms of key concept. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

The key concepts show the definition of terms related to the topics. The mean (M = 4.68) shows a very high level of validity in terms of key concept. Similarly, the Home-School Link reflects the most important aspect of what is being taught as provided by MELC. Gaining a slightly lower mean (M = 4.50), it still indicates a strong agreement of the teachers on the validity of the supplementary learning materials component

with regards to its key concepts.

The level of the Home-School Link's components in terms of key concepts gained a weighted mean score of 4.57 and a standard deviation of 0.77 and was verbally interpreted as *very high* among the respondents. This implies that the material accurately represents, reflect, or covers the essential ideas, principles, or information that is intended to convey according to educational standard.

The most crucial elements of the material being taught, as supplied by MELC, were reflected in the key ideas, which also gave definitions for words associated with the subjects.

Table 3 Level of the Home-School Link's Components in terms of Examples

STATEMENT	MEAN	SD	REMARKS
The examples given are based on the Grade 10 Most Learning Competencies.	4.64	0.64	Strongly Agree
The examples given are aligned with the objectives of the lesson.	4.55	0.58	Strongly Agree
Shows concepts related to the content of the lesson.	4.50	0.66	Strongly Agree
Provides activities that help learners apply their learning to a new situation or context beyond the lesson.	4.36	0.77	Strongly Agree
The examples are suited to the needs of the learners.	4.27	0.81	Strongly Agree
Weighted Mean		4.46	
SD		0.71	
Verbal Interpretation		Very High	

Table 3 illustrates the level of the Home-School Link's components in terms of examples. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

The examples given were based on the Grade 10 Most Learning Competencies. The mean (M = 4.64) shows a very high level of validity in terms of examples. Similarly, the examples were suited to the needs of the learners. Gaining a slightly lower mean (M = 4.27), it still indicates a strong agreement of the teachers on the validity of the supplementary learning materials component with regards to its examples.

The level of the Home-School Link's components in terms of examples gained a weighted mean score of 4.46 and a standard

deviation of 0.71 and was verbally interpreted as *very high* among the respondents. This implies that the examples provided in the material are highly relevant, accurately illustrate the concepts being taught.

The examples provided were appropriate for the learners' requirements and based on the Grade 10 Most Learning Competencies.

Table 4 illustrates the level of of the Home-School Link's components in terms of assessment. The statements, mean, standard deviation, remarks and verbal interpretation were presented.

The assessment implemented program was accurate and



aligned to the design. The mean (M = 4.68) shows a very high level of validity in terms of assessment. Similarly, deftly designs assessment that consider to academic, social, and emotional needs of the learner. Gaining a slightly lower mean

(M = 4.27), it still indicates a strong agreement of the teachers on the validity of the supplementary learning materials component with regards to its assessment.

Table 4 Level of the Home-School Link's Components in terms of Assessment

STATEMENT	MEAN	SD	REMARKS
The assessment implemented program is accurate and is aligned to the design.	4.68	0.55	Strongly Agree
The assessment is measurable in terms of the result in every activity and anchored in the objectives.	4.64	0.57	Strongly Agree
Deftly designs assessment that consider to academic, social, and emotional needs of the learner.	4.27	0.86	Strongly Agree
Shows complete understanding of the questions, mathematical ideas, and process.	4.36	0.77	Strongly Agree
Evaluates the student's knowledge and understanding of the lesson.	4.41	0.78	Strongly Agree
Weighted Mean		4.47	
SD		0.73	
Verbal Interpretation		Very High	

The level of the Home-School Link's components win terms of assessment gained a weighted mean score of 4.47 and a standard deviation of 0.73 and was verbally interpreted as *very high* among the respondents. This implies that the questions or tasks accurately reflect the material covered, are aligned with the learning objectives, and can reliably gauge student's understanding and the mastery of the content.

academic, social, and emotional needs into account.

Level of the Home-School Link's Characteristics

In this study the major findings for the level of the Home-School Link's characteristics in terms of design, clarity, appropriateness and usefulness were shown below.

The program's implemented assessment was precise, in line with its design, and skillfully created to take the learner's

The following tables show the statements, mean, weighted mean, standard deviation, remarks, and verbal interpretation.

Table 5 Level of the Home-School Link's Characteristics in terms of Design

STATEMENT	MEAN	SD	REMARKS
The design is well-organized which make the lesson more interesting.	4.50	0.84	Strongly Agree
The design is suitable for a range of learning styles and instructional approaches.	4.55	0.84	Strongly Agree
The language used is clear, concise, and motivating.	4.55	0.78	Strongly Agree
The mathematical symbols used are well-defined.	4.55	0.72	Strongly Agree
The instructions in the Home-School Link are concise and easy to follow.	4.50	0.72	Strongly Agree
Weighted Mean		4.53	
SD		0.78	
Verbal Interpretation		Very High	

Table 5 illustrates the level of the Home-School Link's characteristics in terms of design. The statements mean, standard deviation, remarks and verbal interpretation were presented.

The mathematical symbols used are well-defined. The mean (M = 4.55) shows a very high level of validity in terms of design. Similarly, the instructions in the Home-School Link were concise and easy to follow. Gaining a slightly lower mean (M = 4.50), it still indicates a strong agreement of the teachers on the validity of the supplementary learning materials characteristics with regards to its design.

deviation of 0.78 and was verbally interpreted as *very high* among the respondents. This implies that the design of the material effectively supports the educational goals it aims to achieve and the layout, structure, visual elements, and overall aesthetic of the material is not only appealing but also functionally appropriate for learning.

The level of the Home-School Link's characteristics in terms of design gained a weighted mean score of 4.53 and a standard

The directions were clear and simple to understand, and the mathematical symbols utilized are well-defined and in line with the design.



Table 6 illustrates the level of the Home-School Link's characteristics in terms of clarity. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

The size of the texts was large enough for students to see. The mean (M = 4.77) shows a very high level of validity in terms of clarity. Similarly, the examples of each lesson were presented clearly. Gaining a slightly lower mean (M = 4.41), it still indicates a strong agreement of the teachers on the validity of

the supplementary learning materials characteristics with regards to its clarity.

The level of the Home-School Link's characteristics in terms of clarity gained a weighted mean score of 4.58 and a standard deviation of 0.73 and was verbally interpreted as *very high* among the respondents. This implies that the material is exceptionally clear in its communication and presentation that can help ensure that students can easily understand the content without misinterpretations.

Table 6 Level of the Home-School Link's Characteristics in terms of Clarity

STATEMENT	MEAN	SD	REMARKS
<i>The Home-School Link are clear to visualize.</i>	4.68	0.63	Strongly Agree
<i>The size of the texts is large enough for students to see.</i>	4.77	0.52	Strongly Agree
<i>The meaning of the texts is clear for students.</i>	4.55	0.78	Strongly Agree
<i>The Home-School Link clarify the items needed in the SLM.</i>	4.50	0.72	Strongly Agree
<i>The examples of each lesson are presented clearly</i>	4.41	0.89	Strongly Agree
Weighted Mean		4.58	
SD		0.73	
Verbal Interpretation		<i>Very High</i>	

Students could easily read the materials because of their size, and each lesson's examples were given in an understandable manner.

Table 7 illustrates the level of the Home-School Link's characteristics in terms of appropriateness. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

The examples were aligned to the learning objectives. The mean (M = 4.59) shows a very high level of validity in terms of appropriateness. Similarly, the materials maintained an atmosphere conducive to inquiry. Gaining a slightly lower mean (M = 4.41), it still indicates a strong agreement of the teachers on the validity of the supplementary learning materials characteristics with regards to its appropriateness.

Table 7 Level of the Home-School Link's Characteristics in terms of Appropriateness

STATEMENT	MEAN	SD	REMARKS
<i>The topics in the Home-School Link are appropriate to the level of the learners.</i>	4.55	0.72	Strongly Agree
<i>The content of the lesson appropriate to the learning objectives.</i>	4.50	0.84	Strongly Agree
<i>The examples are aligned to the learning objectives.</i>	4.59	0.72	Strongly Agree
<i>The Home-School Link as supplementary learning materials promote an active quest for new information and ideas.</i>	4.45	0.84	Strongly Agree
<i>The materials maintain an atmosphere conducive to inquiry.</i>	4.41	0.78	Strongly Agree
Weighted Mean		4.50	
SD		0.78	
Verbal Interpretation		<i>Very High</i>	

The level of the Home-School Link's characteristics in terms of appropriateness gained a weighted mean score of 4.50 and a standard deviation of 0.78 and was verbally interpreted as *very high* among the respondents. This implies that the material is highly suitable for its intended audience in terms of educational level and learning objectives.

The examples maintained an environment that encouraged inquiry while also being in line with the learning objectives.

Table 8 illustrates the level of the Home-School Link's characteristics in terms of usefulness. The statements, mean, standard deviation, remarks, and verbal interpretation were

presented.

The Home-School Link is a useful supplementary learning material in teaching Mathematics 10. The mean (M = 4.64) shows a very high level of validity in terms of usefulness. Similarly, the supplementary learning material allows the students to use their time more efficiently. Gaining a slightly lower mean (M = 4.59), it still indicates a strong agreement of the teachers on the validity of the supplementary learning materials characteristics with regards to its usefulness.

The level of the Home-School Link's characteristics in terms of usefulness gained a weighted mean score of 4.62 and a standard



deviation of 0.74 and was verbally interpreted as *very high* among the respondents. This implies that the material is highly effective in fulfilling its intended purpose, which is to support and enhance the learning process.

The Home-School Link helps students manage their time more effectively and is a helpful addition to the curriculum when teaching Mathematics 10.

Table 8 Level of the Home-School Link's Characteristics in terms of Usefulness

STATEMENT	MEAN	SD	REMARKS
<i>The Home-School Link is a useful supplementary learning material in teaching Mathematics 10.</i>	4.64	0.71	Strongly Agree
<i>The Home-School Link serves as a learning material to help the students to understand the topics at their own pace.</i>	4.64	0.71	Strongly Agree
<i>The learning material will allow the students to use their time more efficiently.</i>	4.59	0.72	Strongly Agree
<i>The Home-School Link uses by the students for enhancing their mathematical ability and understanding the concepts of the topics.</i>	4.59	0.83	Strongly Agree
<i>The learning outcomes are identified through the materials provided in the Home-School Link.</i>	4.64	0.71	Strongly Agree
Weighted Mean		4.62	
SD		0.74	
Verbal Interpretation		Very High	

Level of Students' Motivation

In this study, the major findings for the level of students' motivation in terms of interest, goal clarity, focus and productivity, and positive attitude were shown below.

The following tables show the statements, mean, weighted mean, standard deviation, remarks, and verbal interpretation.

Table 9 illustrates the level of students' motivation in terms of interest. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

The students were excited about the prospects of what they can

achieve through their study. The mean (M = 4.41) shows a very high level of motivation in terms of interest. Similarly, they actively seek out on the supplementary learning material for self-study. Gaining a slightly lower mean (M = 3.87), it still indicates an agreement of the students on the level of motivation in terms of their interest.

The level of students' motivation in terms of interest gained a weighted mean score of 4.24 and a standard deviation of 0.80 and was verbally interpreted as *very high* among the respondents. This implies that the students are deeply engaged and enthusiastic about the subject matter or learning activities.

Table 9 Level of Students' Motivation in terms of Interest

STATEMENT	MEAN	SD	REMARKS
<i>I find the topics I am studying genuinely interesting.</i>	4.32	0.79	Always
<i>I am enthusiastic about exploring new knowledge in my study.</i>	4.38	0.76	Always
<i>I enjoy delving deep into materials.</i>	4.23	0.80	Always
<i>I actively seek out supplementary learning material for self-study</i>	4.87	0.90	Always
<i>I am excited about the prospects of what I can achieve through my study.</i>	4.41	0.76	Always
Weighted Mean		4.24	
SD		0.80	
Verbal Interpretation		Very High	

The students were excited about the prospects of what they can achieve through their study and actively seek out on the supplementary learning material for self-study.

Table 10 illustrates the level of students' motivation in terms of goal clarity. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

The students have well-defined academic and personal goals. The mean (M = 4.29) shows a very high level of motivation in terms of goal clarity. Similarly, they regularly review and adjust their goals to stay aligned with their aspirations. Gaining a slightly lower mean (M = 3.99), it still indicates an agreement of the students on the level of motivation in terms of their goal clarity.



The level of students' motivation in terms of goal clarity gained a weighted mean score of 4.17 and a standard deviation of 0.85 and was verbally interpreted as *high* among the respondents. This implies that the students have a clear understanding of their learning objectives, what is expected of them, and why

they are engaging in the learning process.

The students have well-defined academic and personal goals and they regularly review and adjust their goals to stay aligned with their aspirations.

Table 10 Level of Students' Motivation in terms of Goal Clarity

STATEMENT	MEAN	SD	REMARKS
<i>I have well-defined academic and personal goals.</i>	4.29	0.79	Always
<i>I set specific and achievable targets for my studies.</i>	4.27	0.89	Always
<i>I regularly review and adjust my goals to stay aligned with my aspirations.</i>	3.99	0.89	Often
<i>I can clearly articulate the purpose of my education.</i>	4.26	0.78	Always
<i>I have strong sense of direction in my studies.</i>	4.06	0.90	Often
Weighted Mean		4.17	
SD		0.85	
Verbal Interpretation		High	

The students have well-defined academic and personal goals and they regularly review and adjust their goals to stay aligned with their aspirations.

The students consistently meet deadlines on tasks. The mean (M = 4.16) shows a high level of motivation in terms of focus and productivity. Similarly, they can maintain focus and avoid distractions during study sessions. Gaining a slightly lower mean (M = 3.78), it still indicates an agreement of the students on the level of motivation in terms of their focus and productivity.

Table 11 illustrates the level of students' motivation in terms of focus and productivity. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

Table 11 Level of Students' Motivation in terms of Focus and Productivity

STATEMENT	MEAN	SD	REMARKS
<i>I can maintain focus and avoid distractions during study sessions.</i>	3.78	0.87	Often
<i>I manage my time effectively and complete assignments promptly.</i>	3.95	0.91	Often
<i>I utilize time management techniques to maximize productivity.</i>	3.82	0.96	Often
<i>I consistently meet deadlines on tasks.</i>	4.16	0.99	Often
<i>I am proactive in organizing my study environment.</i>	4.07	0.92	Often
Weighted Mean		3.96	
SD		0.93	
Verbal Interpretation		High	

The level of students' motivation in terms of focus and productivity gained a weighted mean score of 3.96 and a standard deviation of 0.93 and was verbally interpreted as *high* among the respondents. This implies that students can maintain their attention on the task at hand and consistently channel their efforts towards achieving their learning goals.

Students consistently meet deadlines on tasks and maintain focus and avoid distractions during study sessions.

Table 12 illustrates the level of students' motivation in terms of positive attitude. The statements, mean, standard deviation, remarks, and verbal interpretation were presented.

Table 12 Level of Students' Motivation in terms of Positive Attitude

STATEMENT	MEAN	SD	REMARKS
<i>I maintain a positive outlook even when facing academic challenges.</i>	4.27	0.82	Always
<i>I view setbacks as opportunities to learn and grow.</i>	4.23	0.77	Always
<i>I actively seek solutions to problems rather than dwelling on them.</i>	4.26	0.91	Always
<i>I believe in my ability to overcome obstacles.</i>	4.26	0.86	Always
<i>I am excited about the journey of learning and personal development.</i>	4.57	0.86	Always
Weighted Mean		4.32	
SD		0.85	
Verbal Interpretation		Very High	



The students were excited about the journey of learning and personal development. The mean ($M = 4.57$) shows a very high level of motivation in terms of positive attitude. Similarly, the students view setbacks as opportunities to learn and grow. Gaining a slightly lower mean ($M = 4.23$), it still indicates a strong agreement of the students on the level of motivation in terms of their focus and productivity.

The level of students' motivation in terms of positive attitude gained a weighted mean score of 4.32 and a standard deviation of 0.85 and was verbally interpreted as *very high* among the respondents. This implies that the students approach their learning with optimism, enthusiasm, and willingness to

embrace challenges.

Students were excited about the journey of learning and personal development and maintained focus and view setbacks as opportunities to learn and grow.

Level of Students' Performance in Mathematics

In this study, the major findings for the level of students' performance in mathematics in terms of formative test and summative test were shown below.

The following tables show the statements, mean, weighted mean, standard deviation, remarks, and verbal interpretation.

Table 13 Level of Students' Performance in Mathematics in terms of Formative Test and Summative Test

Raw Score	Students' Performance					
	Formative			Summative		
	f	%	Verbal Interpretation	f	%	Verbal Interpretation
25-30	0	0%	Advance	62	61%	Advance
19-24	0	0%	Proficient	24	24%	Proficient
13-18	34	34%	Approaching Proficiency	15	15%	Approaching Proficiency
7-12	61	60%	Developing	0	0%	Developing
0-6	6	6%	Beginning	0	0%	Beginning
Total	101	100%		101	100%	
	Mean = 11.36 SD = 2.59		Developing	Mean = 24.44 SD = 4.98		Proficient

Table 13 illustrates the level of students' performance in mathematics in terms of formative test and summative test. In formative test, 34 out of 101 students got a score ranging from 13 – 18 with descriptive value of *Approaching Proficiency*. 60% or 61 students got the score ranging from 7 – 12 with a descriptive value of *Developing* while 6 students got a score 6 and below with a descriptive value of *Beginning*. The students' performance in mathematics in terms of formative test gained a mean score of 11.36, interpreted as *Developing* level of performance in mathematics. This implies that the students are making progress and beginning to grasp some of the concepts and skills being taught, but still have room for improvement.

In summative test, 62 out of 101 students got a score ranging from 25 – 30 with descriptive value of *Advance*. 24% or 24 students got the score ranging from 19 – 24 with a descriptive value of *Proficient* while 15 students got a score ranging from 13 – 18 with a descriptive value of *Approaching Proficiency*. The students' performance in mathematics in terms of summative test gained a mean score of 24.44, interpreted as *Proficient* level of performance in mathematics. This implies that the students have demonstrated a solid understanding and the mastery of the mathematical concepts and skills assessed by the test.

Educators should integrate formative assessment strategies into instruction, provide timely and specific feedback, and encourage student involvement in the assessment process to improve performance in summative tests

Difference in Students' Performance in Mathematics with the Use of Home-School Link

In this study, the major findings for the significant difference in students' performance in mathematics in terms of formative and summative test with the use of Home-School Link were shown below.

The following tables show the statements, mean, weighted mean, standard deviation, remarks, and verbal interpretation.

To test the significant difference on the Use of Home-School Link as a supplementary learning material on mathematics performance in terms of formative and summative test, data were treated statistically using Minitab 14 using a t-test.

There is a significant difference observed in students' performance in mathematics in terms of formative test and summative test with the use of Home-School Link. This explains the p-values obtained which are less than the significance alpha (0.05), hence there is the presence of a significance.



Table 14 Difference in Students' Mathematics Performance in terms of Formative Test and Summative Test with the use of Home-School Link

Students' Performance	Mean	Difference	N	t-value	p
Formative Test	11.36				
Summative Test	24.44	13.08	101	33.63	0.000*

Note: * $p < .05$.

Table 14 presents the test difference in students' performance in mathematics in terms of formative test and summative test with the use of Home-School Link.

Effect of the Use of Home-School Link on the Students' Motivation

In this study, the major findings for effect of the use of the Home-School Link on the students' motivation were shown below.

The following tables show the statements, mean, weighted mean, standard deviation, remarks, and verbal interpretation.

To test the significant effect of the use of Home-School Link on students' motivation, data were treated statistically using

Minitab 14 using the t-test.

Table 15 shows the results of the statistical analysis of the significant effect the use of Home-School link on students' motivation.

The supplementary learning material components, such as objectives, key concepts, examples and assessment, all show a statistically significant positive effect on students' goal clarity and focus and productivity ($p = 0.000; 0.001$). This implies that the components and characteristics of the Home-School Link led to a significant improvement of students' goal clarity and focus and productivity towards learning.

Table 15 Effect of the Use of Home-School Link on the Students' Motivation

Home-School Link			Students' Motivation			
			Interest	Goal Clarity	Focus and Productivity	Positive Attitude
Components	Objectives	t-value p-value N	2.31 0.011* 101	2.61 0.004* 101	3.81 0.000* 101	1.74 0.041* 101
	Key Concept	t-value p-value N	2.04 0.021* 101	2.36 0.009* 101	3.53 0.000* 101	1.50 0.067 101
	Example	t-value p-value N	1.34 0.090 101	1.70 0.045* 101	2.93 0.001* 101	0.80 0.212 101
	Assessment	t-value p-value N	1.38 0.083 101	1.74 0.042* 101	2.96 0.001* 101	0.85 0.197 101
Characteristics	Design	t-value p-value N	1.71 0.044* 101	2.04 0.021* 101	3.22 0.000* 101	1.18 0.118 101
	Clarity	t-value p-value N	2.15 0.016* 101	2.46 0.007* 101	3.65 0.000* 101	1.59 0.056 101
	Appropriateness	t-value p-value N	1.53 0.064 101	1.86 0.032* 101	3.05 0.001* 101	1.00 0.157 101
	Usefulness	t-value p-value N	2.34 0.010* 101	2.64 0.004* 101	3.80 0.000* 101	1.80 0.036* 101

Note: * $p < .05$.

Effect of the Use of Home-School Link on the Students' Mathematics Performance

To test the significant effect of the Use of Home-School Link

as a supplementary learning material on mathematics performance in terms of Summative Test, data were treated statistically using Minitab 14 using t-test.



Table 16 Effect of the Use of Home-School Link on the Students' Performance in Mathematics in terms of Summative Test

Home-School Link		Students' Performance	
		Summative Test	
Components	Objectives	t-value p-value N	18.17 0.000* 101
	Key Concept	t-value p-value N	18.18 0.000* 101
	Example	t-value p-value N	18.30 0.000* 101
	Assessment	t-value p-value N	18.29 0.000* 101
Characteristics	Design	t-value p-value N	18.22 0.000* 101
	Clarity	t-value p-value N	18.18 0.000* 101
	Appropriateness	t-value p-value N	18.25 0.000* 101
	Usefulness	t-value p-value N	18.14 0.000* 101

Note: * $p < .05$.

Table 16 shows the results of the statistical analysis of the significant effect on the use of Home-School link on students' mathematics performance in terms of summative test.

This implies that the components of the learning material led to a significant improvement of students' performance in mathematics.

Besides, the Home-School Link's characteristics such as design, clarity, and appropriateness, all show a statistically significant positive effect on students' performance in mathematics in terms of summative test ($p = 0.000$). This implies that the characteristics of the learning material has a significant influence on the improvement on students' performance in mathematics.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings above, the following conclusions were hereby drawn:

1. There is a significant difference in students' mathematics performance in terms of formative test and summative test with the use of Home-School Link. Thus, the null hypothesis was rejected. This means that the students' mathematics performance in summative test was better than formative test.
2. The use of the Home-School Link as a supplementary learning material significantly affect the students' motivation. Thus, the null hypothesis was rejected. This imply that the use of the Home-School Link had a positive effect on the students' motivation.

3. A significant effects of the use of the Home-School Link as a supplementary learning material on students' performance in mathematics in terms of summative test was noted. Thus, the null hypothesis was rejected. This means that the Home-School Link is an effective tool to elevate the level of students' motivation and increase students' mathematics performance.

In the formulated conclusions from the findings, it was recommended that:

1. Mathematics teachers may integrate the use of Home-School Link into their discussion of mathematics concepts that will support the needs of students to have mastery of the topic and boost their self-confidence to participate.
2. Mathematics teachers are encouraged and may develop more Home-School Link Material in different topics not only in second quarter topics but in other fields of Mathematics.
3. Future researchers may conduct studies regarding supplementary learning materials in mathematics, because this will help the education sector to see the importance of supplementary learning materials in the curriculum implementation.

REFERENCE

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MOTHER TONGUE ACTIVITY SHEETS IN ENHANCING LEARNER'S COGNITIVE COMPETENCY AND PERFORMANCE

Mark Kevin Gutierrez Villamarzo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The main goal of this study was to examine the relationship of components and features of mother tongue activity sheets to student's cognitive competency and performance. This particularly would like to determine the level of validity of components of mother tongue activity sheets; features of learner's cognitive competencies in terms of remembering, understanding, and applying and performance. Moreover, this research would like to test the relationship of components and features of mother tongue activity sheets and student's cognitive competencies and students performance in terms of practical test.

This study used an experimental method in collecting and gathering data based on the mother tongue evaluation of the respondents. To gather data, the researcher utilized a researcher-designed questionnaire that served as the primary tool and used statistical analyses including mean, standard deviation, frequency, percentage, and Pearson correlation coefficient to assess hypotheses.

From the analysis of data of the research, It is evident the respondents are strongly agree about the level of validity of component of mother tongue activity sheets, features of mother tongue activity sheets and their level of cognitive competencies. Furthermore, students were outstanding among the folk-dance presentations as part of the assessment in physical education. There is significant relationship between components of features of mother tongue activity sheets and learner's cognitive competencies, while there is no significant relationship in practical test.

Based on the findings the study, it can be concluded that the components and features of mother tongue activity sheets upon utilization in the physical education showed significant importance on developing students cognitive competency. This mean that cognitive development in physical education subject were influence by the components and features of mother tongue activity sheets as it supported the students understanding of concept with activities, task and content and processed the mastery of competencies., Meanwhile, the components and features of mother tongue activity sheets upon utilization in the physical education showed as not major determinant on developing students' performance in practical examinations. The students have different level of execution based their level of understanding and capacity to perform as well as their learning style. Therefore, the hypothesis stated were rejected and accepted in terms of practical test.

Based on the findings and conclusions made, it is recommended that school may utilize the activity sheets aligned to the step-by-step procedure of lesson delivery with complete components to address student's difficulty and conduct learning action cell in designing activity sheets with complete components and features that includes activities to address students' cognitive competencies. Also, the physical education teachers may use mother tongue-based instruction in presenting steps in performing specific dance among learners to attain mastery. for the future study further investigation on the implementation practices and teacher's preparation in creating mother tongue based instructional materials were recommended.

KEYWORDS: mother tongue; student's cognitive competency; performance

1. INTRODUCTION

Mastery of competency measured through performance task and written work is the primary determinant of student learning and effective implementation of the curriculum. With rampant issues of decline student performance in world ranking regarding the student's performance in reading, mathematics, and sciences, it is also evident that the students also encountered difficulty in maintaining high performance in other Makabayan subject particularly in physical education under MAPEH as they had difficulty in comprehending the lesson content from the module.

Teachers in the department of education (DepEd) utilized the different learning module provided as it is crafted based on the most essential learning competency with minimal content and focus on the competencies. From this, the teacher may be able

to deliver the content and the competency among learners based on the budget of work within the grading.

From the years of utilization of the module, there are still difficulties among learners to understand the content and perform activities. There are numbers of learners who barely understand the language and perform the instruction in assigned performance task in particular topic. This implied that language has a big role in the learning process. There are activities that aligned in the capacity in most learners, but some learner's had difficulty to even read the content of the lesson written in English.

Activity sheets are instructional materials used by the teachers to give a glimpse of the content of the lesson as well as completed package of written and performance tasks with rubrics. With this, the shortage in module compared to the



number of learners were addressed in many schools. The teachers are providing the summary of the lesson and focused on student's ability to respond on different type of activities aligned to the lesson.

Mother tongue was usually a medium of instruction in elementary students from kinder to grade 3 as it is mandated by the department of education. Students on this level had difficulty to read the English language then it is advisable to use their native language for instruction. As a result, the students may easily express their idea and provide their own perspective in the lesson content.

With gradual decline on student performance and learning habits to understand the lesson content particularly in the lesson which are taught in English language, the researcher develops a study that would determine the effectiveness of mother tongue activity sheets for improvement of cognitive competency of struggling learners in Physical Education during face-to-face instruction.

1.1 Statement of the Problem

This study specifically aimed at addressing the following specific research questions:

1. What is the level of validity of the component of mother tongue activity sheet in terms of:
 - 1.1. Objectives;
 - 1.2. Content;
 - 1.3. Demonstration;
 - 1.4. Activity; and
 - 1.4. Valuing?
2. What is the level of validity in the features of mother tongue activity sheets in terms of:
 - 2.1. Design;
 - 2.2. Relevance;
 - 2.3. Usability; and
 - 2.4. Clarity?
3. What is the level of learner's cognitive competency in terms of:
 - 3.1. Remembering;
 - 3.2. Understanding; and
 - 3.3. Applying?
4. What is the level of learner's performance in terms of practical test?
5. Do mother tongue activity sheets significantly affect the learner's cognitive competency?
6. Do mother tongue activity sheets significantly affect the learner's performance?

2. METHODOLOGY

This study used a descriptive method in collecting and gathering data. As it described the distribution of variables. A

descriptive method of research is appropriate whenever the objects of any class vary among themselves, and one knows the extent to which condition altering among the subject. This research would like to describe the occurrence of phenomenon in teaching and learning practice and the existing factor that may affect the result.

According to Aggarwal & Ranganathan (2019). Descriptive studies are quick, cost-effective, and simple to conduct, aiding in resource planning, community assessment, and disease etiology. They can identify temporal and geographic variations in illness incidence and generate hypotheses for more complex designs.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results yielded from treatment of the data gathered in this study. The finding on the effects of action research orientation to teaching practices and student learning.

Level of Validity on the Components of Mother Tongue Activity Sheet

In this study, the level of validity on the Components of Mother Tongue Activity Sheet refers to Objective, Content, Demonstration, Activity, and Valuing was statistically determined by mean and standard deviation.

The level of validity on the Components of Mother Tongue Activity Sheet were revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Objective

Table 1 represented the level of validity on the components of mother tongue activity sheets in terms of objectives. This emphasized the objectives characteristics set in every lesson aligned with the students' competency and perception. The table included the statements, standard deviation, and remarks.

Table 1 showed the level of validity on the components of mother tongue activity sheet in terms of objective. It can be gleaned the learners perceived the objectives of Mother Tongue Activity Sheet as strongly agree ($M=4.51$, $SD=0.65$) as the activity sheet consist of learning goals that are clarified among the students which allowed the learners compare their experiences to the lesson content. This implied that the lesson objectives set in the learning activity sheets provide a clear glimpse of the learning expectation that learners must possess after the discussion and series of activities as part of academic requirements.



Table 1 Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Objective

Statement	Mean	Sd	Remarks
<i>The teachers used of mother tongue activity sheets allows learners to...</i>			
Identify the learning expectations among them.	4.52	0.62	Strongly Agree
Aware of different tasks they must perform in the discussion.	4.62	0.57	Strongly Agree
Have a glimpse of learning experiences they will have in the teaching and learning process.	4.53	0.58	Strongly Agree
Align the lesson content with their usual daily practices.	4.36	0.78	Strongly Agree
Compare the lesson experiences to their observation in the community.	4.52	0.64	Strongly Agree
Weighted Mean		4.51	
SD		0.65	
Verbal Interpretation			Strongly Agree

The table expressed that the objectives on the mother tongue activity sheets obtained strongly agree ($M=4.62$, $SD=0.65$) among the respondents as this allows the learners to be aware on the different task they must perform during the teaching-learning process. This means that the lesson objectives included in the activity sheets allowed learners to perceive the different competencies they must attain through different tasks included in the particular topic. The most essential learning competencies were introduced to the learners in the beginning of the lesson and provide clear learning objectives based on blooms taxonomy and competencies of the subject.

High achievers in a course demonstrate improved self-regulation and a solid grasp of the material, leading to better alignment of learning goals and higher grades, while students at the bottom may struggle due to a lack of understanding (Wu, 2023).

Moreover, the learners strongly agree ($M=4.36$, $SD=0.78$) that the lesson objectives set by the teachers in utilization of mother tongue activity sheets were aligned the lesson content to the student's day to day experiences. This denoted that the learning goals proposed in the topics using mother tongue activity sheets permitted the students to compare their daily experiences and previous knowledge to existing discussion making the lesson relevant and useful. The lesson objectives set in the learning activity sheets facilitates the students critical thinking which allowed the students to perceive the discrepancy and similarity of the practices in the community based on their experiences and the lesson content they have discussed.

Table 2 represented the level of validity on the components of mother tongue activity sheets in terms of content. This emphasized the content characteristics presented on the activity sheets based on student's ability to understand and experiences. The table included the statements, standard deviation, and remarks.

Table 2 Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Content

Statement	Mean	Sd	Remarks
<i>The teachers used of mother tongue activity sheets allows learners to...</i>			
Enjoy the lesson content within their level of understanding.	4.63	0.59	Strongly Agree
Use lesson content based on their perceived functions.	4.52	0.58	Strongly Agree
Incorporates student's experiences to accomplish task.	4.44	0.67	Strongly Agree
Enhance students practice of competencies through varied activities.	4.52	0.67	Strongly Agree
Address problems present in the community that encountered.	4.51	0.66	Strongly Agree
Weighted Mean		4.53	
SD		0.64	
Verbal Interpretation			Strongly Agree

Table 2 showed the level of validity on the components of Mother Tongue Activity Sheet in terms of Content. It is evident that the respondents were evaluated the materials as strongly agree ($M=4.36$, $SD=0.78$) on level of validity on the components of mother tongue activity sheets in terms of content proved that the lesson content presented using the activity sheets were aligned to the students' level of experiences as it contains words which are easy to understand and complexity of cognitive development among learners. Mother tongue can also

be used for remediation. Also, the students' expertise and interest were considered in designing the lesson as it composed of learning tasks which are aligned on the student's attention span and motivation level to digest varied information related to the topic.

The table clearly showed that the respondents strongly agree ($M=4.63$, $SD=0.69$) that the lesson content of the mother tongue activity sheets allowed them to enjoy the lesson within



their level of understanding. This indicated that the delivery and presentation of the topic through mother tongue activity sheets were perceived by the students as enjoyable and consider their level of understanding that contributed to their mastery. As it only includes significant information that the students needed to attain mastery of the content and aid them to accomplish academic task like performance task and independent practice test.

Furthermore, the students were also strongly agree ($M=4.51$, $SD=0.66$) that the mother tongue activity sheet contains bits of information that address the problems in the community that they encountered. This implied that the activity sheets contained a set of activities that allowed the students to reflect on the community problems through observation and experience integration among learners. They were able to reflect on the community set up and create solutions through critical thinking and analysis of the situation. The mother tongue activity sheets provide the students with the opportunity to test their perception on community set up as they contain different reading materials and activities that may address the local problems of the students.

Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Demonstration

Table 3 represented the validity level on the components of mother tongue activity sheets in demonstration. This emphasized the characteristics of mother tongue activity sheets that provided an instruction and opportunity to the students to practice specific skills in physical education. The table included the statements, standard deviation, and remarks.

Table 3 presented the level of validity on the components of Mother Tongue Activity Sheet in terms of Demonstration. It is evident that the respondents were strongly agree that ($M=4.52$, $SD=0.62$) components in terms of demonstrations proved that the activity sheets presented with the use of mother tongue allowed the students to reflect on their own understanding and adjust learning practice based on the encountered problems.

This implied that the activity sheet showed evident content on demonstration activities that execute the student's understanding and measures competencies.

Table 3 Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Demonstration

<i>Statement</i>	<i>Mean</i>	<i>Sd</i>	<i>Remarks</i>
<i>The teachers used of mother tongue activity sheets allows learners to...</i>			
Perform varied levels of cognitive skills.	4.57	0.60	Strongly Agree
Execute reflective learning on the lesson content.	4.48	0.58	Strongly Agree
Applied learn concept from the lesson through performance task.	4.54	0.66	Strongly Agree
Innovate the execution of activities based on understanding.	4.42	0.67	Strongly Agree
Adjust on problem encountered during the execution of the folk dance.	4.61	0.57	Strongly Agree
Weighted Mean		4.52	
SD		0.62	
Verbal Interpretation		Strongly Agree	

The table entailed that the students strongly agreed ($M=4.61$, $SD=0.57$) that the mother tongue activity sheets permitted the students to adjust on the problems encountered during the execution of folk dance. This indicated that the students had the opportunity to perceive problems in the presentation of the folk dance and create alternative solutions to execute the tasks assigned. With the student's exposure on series of performance tasks related to folk dance, they perceived the difficulty in performing it by couple and by group which may affect the execution of the steps as well as the appropriate exhibit of steps. With this the learners create alternative solutions that test their creativity individually or by group to address the perceived problems for the performance task.

Furthermore, students also strongly agree ($M=4.42$, $SD=0.67$) that the students had the opportunity to innovate the execution of activities based on understanding upon utilization of mother tongue activity sheets. This implied that the mother tongue activity sheets provide the contents and activities that process students' innovative skills in performing academic requirement and performance task to execute their understanding of the concept and competencies. Using mother tongue activity sheets

in teaching folk dance among students, they perceived the basic steps and create innovative choreography that both reflects the culture and origin of the dance as well as the student's expertise in performance. Chances are that student's performances will improved because they understand much deeper the content of their lesson.

Engagement, academic motivation, and course design significantly impact student learning outcomes. Improving instruction through project activities, blended learning, and reinforcement systems is crucial. Teachers should actively participate in group projects, encourage communication, and provide timely feedback for better learning outcomes and skill development (Li & Zhu,2023).

Table 4 represented the level of validity on the components of mother tongue activity sheets in terms of Activity. This emphasized the independent practices included in the activity sheets that targeted the student's recall of the concepts. The table included the statements, standard deviation, and remarks.



Table 4 Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Activity

Statement	Mean	Sd	Remarks
<i>The teachers used of mother tongue allows learners to...</i>			
Practice the concept based on varied written works.	4.71	0.57	Strongly Agree
Allows the integration of student's experiences to accomplish task.	4.56	0.60	Strongly Agree
Answer written works as it is based on their level of understanding.	4.60	0.65	Strongly Agree
Accomplish task it considers the attention span of the learners.	4.41	0.67	Strongly Agree
Perform critical thinking and creative thinking.	4.49	0.66	Strongly Agree
Weighted Mean		4.55	
SD		0.64	
Verbal Interpretation		Strongly Agree	

Table 4 showed the level of validity on the components of Mother Tongue Activity Sheet in terms of Activity. It is evident that the strongly agree ($M=4.55$, $SD=0.54$) on the components of mother tongue activity sheets in terms of activity proved that the activity sheets presented with the use of mother tongue used learning task that are within their capacity and level of understanding with assurance on their development of thinking abilities and accomplishment of the academic responsibility. This implied that the activities included in the activities were aligned with the student's level of cognitive development and capacity to execute that may lead to the mastery of the competencies in folk dances.

The table points out that the learners strongly agree ($M=4.71$, $SD=0.57$) that the utilization of mother tongue activity sheet in the lesson delivery allowed the learners to practice the concept into varied written works. This characterized that the students had the opportunity to test their level of mastery in different concepts related to the lesson as they fully understand the instruction and nature of the activities in the materials which allowed the students to practice independently and monitor their own development of competencies and mastery.

In addition, the students also strongly agree ($M=4.41$, $SD=0.67$) that they had the opportunity to accomplish their task as it considers their attention span. This implied that the task presented in the activity sheets were within the attention span of the group of learners as it is written in language that they can understand and use phrases that are concise enough to provide instructions. The activity considered the students' ability to accomplish the task within the given time aligned budget of work.

Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Valuing

Table 5 represented the level of validity on the components of mother tongue activity sheets in terms of valuing. This emphasized the portion of mother tongue activity sheets that allowed learners to relate and reflect the lesson content to their everyday activities. Lessons should affect learners for them to apply it in their daily life. Somehow, applications are important in everyday lessons to ensure if the learners really understand the content of what they have already discuss for. The table included the statements, standard deviation, and remarks.

Table 5 Level of Validity on the Components of Mother Tongue Activity Sheet in terms of Valuing

Statement	Mean	Sd	Remarks
<i>The teachers used of mother tongue allows learners to...</i>			
learners to compare different dances.	4.39	0.67	Strongly Agree
Ask a question regarding the steps of a particular folk dance.	4.37	0.63	Strongly Agree
Perform folk dance to appreciate its contribution to physical fitness.	4.26	0.65	Strongly Agree
Exercises on basic steps of folk dances steps to value healthy well being	4.22	0.72	Strongly Agree
Steps that may serve as parts of daily exercise.	4.30	0.66	Strongly Agree
Weighted Mean		4.31	
SD		0.66	
Verbal Interpretation		Strongly Agree	

Table 5 showed the level of validity on the components of Mother Tongue Activity Sheet in terms of Valuing. The data entailed that the students were strongly agree ($M=4.31$, $SD=0.66$) on the components of mother tongue activity sheets in terms of valuing which proved that the activity sheets on totality contribute to their understanding of folk-dance application and practices as well as its effect to their well-being.

The table included that the students strongly agree ($M=4.39$, $SD=0.67$) that the learners had the opportunity to compare different dances. This indicated that the activity sheets

contained task that allow the learners to reflect on the concepts discuss regarding the characteristics of different folk dances in the Philippines and compare the steps and values being execute in the dance. There are presented images and steps among lessons that allow the learners to perceive the series of steps and nature of the dances which aid them to follow the lesson.

Moreover, the table indicated the learners were still strongly agree ($M=4.22$, $SD=0.72$) that the students had the chance to exercise basic steps of folk dances to contribute to their health and well-being. This implied that the activity sheets provide



appropriate contents and activities that allows the learners to perceive the importance of performing folk dances of the Philippines. More so, the students also relate the benefits of performing dances in enhancing their well-being in terms of physical, emotional, and psychological well-being.

More so it designs and aligns to the existing program of the department.

Level of validity on the Features of Mother Tongue Activity Sheet in terms of Design

In this study, level of validity on the features of mother tongue-based activity sheet which refers to design, relevance, usability, and clarity and statistically determined by the mean and standard deviation.

The validity on the features of mother tongue-based activity sheet were revealed in the following table, which shows the

Table 6 Level of Validity on the Features of Mother Tongue Activity Sheet in terms of Design

Statement	Mean	Sd	Remarks
The mother tongue activity sheet contains...			
The fonts that are easy to read.	4.68	0.52	Strongly Agree
Layout that is aligned is not overcrowded and congested.	4.46	0.66	Strongly Agree
Minimal pictures that support learning flow.	4.46	0.74	Strongly Agree
Icons that lead the eye of the reader to its flow.	4.52	0.50	Strongly Agree
Color palettes that are not too expressive and not too dull to the student's eye.	4.49	0.67	Strongly Agree
Weighted Mean		4.52	
SD		0.63	
Verbal Interpretation		Strongly Agree	

The table revealed that the learners are strongly agree ($M=4.68$, $SD=0.52$) that the mother tongue activity sheet used fonts that are easy to read. This implied that the students easily perceived the lesson content and activity as it utilized that font to support the emphasis of the lesson and reading activity of the students rather than aesthetic.

With this, the concepts indicated in the lesson were easily understood with enough font size that support the flow of the lesson making it less congested. With this, it processes the perception of short passages of materials on the side of the students.

College and university publications showcase education through their exquisite size, weight, and volume, showcasing contemporary aesthetic expression. Book layout design has become crucial in enhancing artistic and creative aspects. Investigating methods, trends, and artistic expression can help increase awareness and strengthen the artistic and creative aspects of current book layout design, ensuring a sense of flowing beauty and richness on every page (Sun, 2022).

Moreover, the data displayed that the students are strongly agree that the mother tongue activity sheets ($M=4.68$, $SD=0.74$) contains minimal pictures that supported learning flow and ($M=4.68$, $SD=0.66$) used layout that are aligned and

statement, mean, standard deviation and verbal interpretation.

Table 6 represented the level of validity on the features of mother tongue activity sheets in terms of design. This emphasized the characteristics of mother tongue activity sheets in terms of graphics and organization of ideas with respect to typography and images. The table included the statements, standard deviation, and remarks.

Table 6 showed the validity on the features of mother tongue-based activity sheets in terms of design. The data proved that the students are strongly agree ($M=4.52$, $SD=0.63$) on the features of mother tongue activity sheets in terms of design which revealed that the layout used in the activity sheets with considerations to fonts and photographs included made the material appealing and easy to use which aids the learning process of the students in folk dance.

not overcrowded or congested. This denoted that the mother tongue activity sheets used enough spacing of the photographs and text which processed the students' eye to flow. Also, the usage of spacing, photograph and font allowed the learners to understand the content and point the emphasis of the lesson. With supported illustration on concept of the lesson, the learners easy cope with different steps of specific folk dance that emphasize the flow through spacing and proper arrangement.

Level of Validity on the Features of Mother Tongue Activity Sheet in terms of Relevance

Table 7 represented the level of validity on the features of mother tongue activity sheets in terms of relevance. This emphasized the characteristics of mother tongue activity sheets in terms of alignment of the content to the curriculum of the respondents, their level of understanding and ability to accomplish the task. The table included the statements, standard deviation, and remarks.

Table 7 shows the level of validity in the features of mother tongue activity sheets in terms of Relevance. The data implied that the students were strongly agree ($M=4.55$, $SD=0.62$) on the features of mother tongue activity sheets in terms of relevance. This indicated that the students perceived the activity sheets as useful with consideration on students' level of understanding, experiences, and attention.



Table 7 Level of Validity on the Features of Mother Tongue Activity Sheet in terms of Relevance

Statement	Mean	Sd	Remarks
<i>The mother tongue activity sheet contains...</i>			
Useful topics.	4.64	0.57	Strongly Agree
Consideration of student's environment.	4.48	0.64	Strongly Agree
Activities within the level of student's understanding.	4.64	0.61	Strongly Agree
Learning activities that are aligned within the student's capacity.	4.47	0.64	Strongly Agree
Length of passage that are within the student's level of attention span.	4.51	0.62	Strongly Agree
Weighted Mean		4.55	
SD		0.62	
Verbal Interpretation		Strongly Agree	

Relevance-based teaching strategies improved students' performance on post-lesson quizzes by increasing their interest in the material, making the lesson more useful, and fostering a positive attitude towards their teacher, suggesting that teachers can enhance learning by aligning course material with students' needs and interests (Knoster& Goodboy,2021)

The data revealed that the students strongly agree ($M=4.64$, $SD=0.57$) that the mother tongue activity sheets contained useful topics among learners. It signified that the content of the activity sheets supports the students' perception of its function making the lesson relevant and useful to daily activities of the student. Student will also easily construct their ideas from the lesson. As the topics were presented in the language which were easy to understand by the students, the steps and discussion

were perceived to be useful and functional as they were able to follow instructions and understand concepts for attainment of competencies.

Moreover, it was also evident from the data that the students were strongly agree ($M=4.47$, $SD=0.64$) that the mother tongue activity sheets utilized activities that are aligned with the students' capacity. This revealed that the mother-togue activity sheets were designed based on the students' strengths and weaknesses and ability to comprehend complex ideas. With the consideration on the students' level of language understanding, the students perceived the activity sheet relevant to their learning process as it considered their ability to cope with the lesson and ability to cope with different steps in performing folk dance enabled the learners to perform the basic steps.

Table 8 Level of Validity on the Features of Mother Tongue Activity Sheet in terms of Usability

Statement	Mean	Sd	Remarks
<i>The mother tongue activity sheet is functional as ...</i>			
It aids the lesson discussion based on students' vocabulary.	4.72	0.50	Strongly Agree
It serves as supplementary material for learners.	4.52	0.67	Strongly Agree
It serves as instructional material for self-faced learning.	4.56	0.58	Strongly Agree
It allows the parents to guide their learners in academic requirements.	4.42	0.65	Strongly Agree
Guide of the learners in performing certain folk dances.	4.54	0.72	Strongly Agree
Weighted Mean		4.55	
SD		0.64	
Verbal Interpretation		Strongly Agree	

Table 8 represented the level of validity on the features of mother tongue activity sheets in terms of usability. This emphasized the characteristics of mother tongue activity sheets in terms of the efforts and expertise needed to utilize the module in the day-to-day lesson. The table included the statements, standard deviation, and remarks.

Table 8 shows the level of validity in the features of mother tongue activity sheets in terms of usability. It is evident that the students strongly agree ($M=4.55$, $SD=0.64$) on the features of mother tongue activity sheets in terms of usability. This indicated that the students perceived the activity sheets as useful as supplementary material for learning physical education in a self-faced manner as they contained vocabulary that can easily be understood by students and parents.

The data showed that the students strongly agree ($M=4.72$, $SD=0.50$) that the mother tongue activity sheets aided the lesson discussion based on the students' vocabulary. This

indicated that the activity sheets utilized in teaching physical education utilized range of vocabulary with consideration on the students' level of understanding to promote mastery of the lesson and easy understanding of the lesson discussed. Phrases of the lesson also considered the complexity of students' ability to read and understand vocabulary, making them able to use the material as support references to their learning process.

Furthermore, the students strongly agree ($M=4.42$, $SD=0.65$) that the mother tongue activity sheets allowed the parents to guide learners in their academic requirements. This proved that the lesson complexity and vocabulary is within the understanding of the parents which aided the students and parent's interaction to accomplished academic task. The level of words used in the activity sheets were consist of words which most of the parents were familiar which enabled them to read and understand the lesson to assist their learners in performing academic activities and monitor their progress in the subject.



Level of Validity on the Features of Mother Tongue Activity Sheet in terms of Clarity

Table 9 represented the level of validity on the features of mother tongue activity sheets in terms of clarity. This emphasized the characteristics of mother tongue activity sheets

in terms of concise and clear statements of content and instruction which facilitated the student's utilization of the module as well as their practical performance. The table included the statements, standard deviation, and remarks.

Table 9 Level of Validity on the Features of Mother Tongue Activity Sheet in terms of Clarity

Statement	Mean	Sd	Remarks
<i>The mother tongue activity sheet is clear as...</i>			
Consist of information that is well explained.	4.71	0.50	Strongly Agree
Contains clear contents which are easy to understand.	4.59	0.60	Strongly Agree
Includes instruction that learners in accomplishing task.	4.60	0.61	Strongly Agree
Includes a well definition of unfamiliar words.	4.42	0.60	Strongly Agree
Utilized a well draft presentation of idea that aids learning.	4.57	0.64	Strongly Agree
Weighted Mean		4.58	
SD		0.60	
Verbal Interpretation		Strongly Agree	

Table 9 shows the level of validity in the features of mother tongue activity sheets in terms of Clarity. It can be gleaned that the students strongly agree ($M=4.58$, $SD=0.60$) on the features of mother tongue activity sheets in terms of clarity. This indicated that the students perceived the activity sheets as clear and easy to understand having the explanation and information presentation. It may help learners to easily acquire information and process it before application.

The data revealed that the students are strongly agree ($M=4.71$, $SD=0.50$) that the mother tongue activity sheet for physical education consist of information that is well explained. This implied that the explanations of the steps and topic in the activity sheets were well elaborated to facilitate students' understanding of the lesson. The explanation was aligned to the level of student's understanding ability to cope with the topic which are not too long and wordy but concise that facilitate better understanding of the lesson.

It helps teachers create engaging plans, encourages critical thinking, and fosters teamwork. This also acquire 21st century skills, providing advice on efficient multimedia use, multidisciplinary approaches, teamwork, evaluations, time

management, and organizational tools.

In addition, the students were also strongly agree ($M=4.42$, $SD=0.50$) that the mother tongue activity sheets included the well definition of unfamiliar words. This implied that the activity sheets in physical education provided a clear meaning of unfamiliar words for the students that supported the students' understanding of the lesson. Most of the words which tended to be new in the vocabulary of the students were explained and defined in the activity sheets and provide context clues aided the learners to better understand the concept of discussion and leded the students to master the competency.

Level of Students' Cognitive Competency in terms of Remembering

In this study, the level of student's cognitive competency pertained to remembering, understanding, and applying which was statistically determined by the mean and standard deviation.

The level of student's cognitive competencies were revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Table 10 Level of Students' Cognitive Competency in terms of Remembering

Statement	Mean	Sd	Remarks
<i>The learners were able to...</i>			
Give the meaning of certain words encountered in the discussion.	4.77	0.45	Strongly Agree
Recall information beneficial to accomplishing tasks.	4.52	0.67	Strongly Agree
Validate gained information through searching support materials.	4.54	0.56	Strongly Agree
Answer lower order thinking skills questions.	4.53	0.60	Strongly Agree
Repeat examples to remember the concept.	4.62	0.61	Strongly Agree
Weighted Mean		4.60	
SD		0.59	
Verbal Interpretation		Strongly Agree	

Table 10 represented the level cognitive competency in terms of remembering. This emphasized the ability of the students to recall information based on the discussed topics. The table

included the statements, standard deviation, and remarks.

Table 10 shows the level of students' cognitive competency in



terms of Remembering. The data revealed that the students are strongly agree ($M=4.60, SD=0.59$) on their cognitive competency development in terms of remembering which implied that students observed the improvement in their cognitive competency as they can recall the information presented in the discussion by answering question and repeat examples.

The data showed that the students were strongly agree ($M=4.60, SD=0.59$) on their capability to give the meaning of certain words encountered in the discussion. This indicated that the learners could recall the learned meaning from the discussion based on their understanding. The learners develop the ability to define words encountered in the discussion and process understanding as they were able to identify the meaning and context of the folk-dance terminologies by mother tongue

activity sheets.

Moreso, the students were also agree ($M=4.52, SD=0.67$) that they develop cognitive competency in the utilization of mother tongue activity sheets as can recall information beneficial to accomplish task. This revealed that the students can use learned concepts from the discussion to accomplish the subject's academic requirements. They were able to answer the independent practices and written works followed by the topic discussion as they could recall the concepts and examples presented and used that as references of their answer.

Table 11 represented the level cognitive competency in terms of remembering. This emphasized the ability of the students to comprehend reading selection and organize ideas. The table included the statements, standard deviation, and remarks.

Table 11 Level of Students' Cognitive Competency in terms of Understanding

<i>Statement</i>	<i>Mean</i>	<i>Sd</i>	<i>Remarks</i>
<i>The learners were able to...</i>			
Give examples from what was read from the content.	4.76	0.53	Strongly Agree
Create a concept map to summarize the lesson content.	4.54	0.58	Strongly Agree
Classify information according to importance.	4.57	0.64	Strongly Agree
Interpret lesson content.	4.49	0.60	Strongly Agree
Weighted Mean		4.57	
SD		0.61	
Verbal Interpretation		Strongly Agree	

Table 11 shows the level of students' cognitive competency in terms of Understanding. The students perceived strongly agree ($M=4.57, SD=0.61$) in their cognitive competency development terms of understanding as they develop the ability to comprehend the written lesson and create conclusion based on understanding.

Students could think beyond the text by the conclusion of the treatment and through the teacher's continual corrective feedback, and they could compensate for their lack of comprehension by using whatever knowledge they already had. Critical thinking skills should be developed and practiced.

The data denoted that the students were strongly agree ($M=4.76, SD=0.53$) that they develop understanding in the utilization of mother tongue activity sheets as they can give examples from what was read from the lesson content. This implied that the students were able to relate their understanding on their perceived experience and observation as they can share information to support the topic.

They had the chance to compare the lesson content on their experiences with other type of dances and capable of sharing ideas by giving examples and execution of basic steps during learning process that facilitated their mastery of competencies in physical education.

Moreso, the students were also strongly agree ($M=4.49, SD=0.60$) on the development of their cognitive competency as

they were able to interpret lesson content.

This implied that the students developed the ability to share ideas and explained the topic well with the use of mother tongue activity sheets as it used easy to understand vocabulary which aid learners to explain the content. The learners can give their own examples and present ideas by imitating the basic steps to clarify the content and master the choreography of given folk dance.

Thus, they should assess first before moving forward to the next topic. Repetition of information can lead them to mastery of subject matter. So, learners will adapt to the educational set up of 21st century.

Level of Students' Cognitive Competency in terms of Applying

Table 12 represented the level cognitive competency in terms of applying. This emphasized the ability of the students to put theories into practice and action through demonstration and execution of the skills. The table included the statements, standard deviation, and remarks.

Table 12 shows the level of students' cognitive competency in terms of Applying. The students were strongly agree ($M=4.57, SD=0.62$) in their development of cognitive competencies terms of applying as they develop the ability execute activities that are related to the lesson presented.



Table 12 Level of Students' Cognitive Competency in terms of Applying

Statement	Mean	Sd	Remarks
<i>The learners were able to...</i>			
Execute learning activities individually or collaboratively.	4.68	0.58	Strongly Agree
Provide tips and suggestions to innovate the practice of concept.	4.57	0.60	Strongly Agree
Identify problems in performing the related task.	4.50	0.66	Strongly Agree
Take initiative in solving problems encountered during performance task.	4.48	0.67	Strongly Agree
Modify the task and innovate what you have learned in the lesson.	4.62	0.57	Strongly Agree
Weighted Mean		4.57	
SD		0.62	
Verbal Interpretation		Strongly Agree	

The data implied that the students were strongly agree ($M=4.68$, $SD=0.58$) on the development of their cognitive competency as were able to execute learning activities individually or collaboratively.

This clarified that the students are confident on the capacity to exhibit competencies related to the discussion of the topic either individually performed or group activity.

As the students were able to understand the concepts of the topic through mother tongue activity sheets written in Filipino language, learners were able to practice different steps related to folk dance in the topic. They can perform the dance steps individually or by group adjusting on the instruction of the task written in the activity sheets.

Moreover, the students were also strongly agree ($M=4.48$, $SD=0.67$) that they develop cognitive competency in terms of application as they showed initiative in solving problems encountered during performance task. This implied that the students showed development in their ability to understand the topic as they figure out problems related to the execution of the competency and create the alternative solution. With the easy-

to-understand vocabulary used in the learning materials, they learners could assess the possible challenges they might encountered in group performance and predicted possible solution as they understand very well the series of steps to execute and create alternative solutions which fits on the individual capacity of the group members.

Level of Students' Performance in terms of Practical Test

In this study, the level of students' performance refers to a practical test. This implied different performance task requiring the students to execute folk dances in the Philippines by group and graded through the rubrics and was statistically determined through frequency and percentage.

Table 13 represented the level of student's performance in terms of practical test. This emphasized the student's level of mastery as evaluated through four dance performance in each topic particularly the Cariñosa, Tinikling, Itik-itik and Polka sa nayon rated with the same rubrics the targeted the student's steps arrangement, coordination, execution, and appropriateness of the props. The table included the mean, standard deviation, and verbal interpretations.

Table 13 Level of Students' Performance in terms of Practical Test

Criteria	Mean	SD	Verbal Interpretation
Sequence	4.84	0.33	Outstanding
Execution	4.55	0.43	Outstanding
Attire	4.71	0.42	Outstanding
Group Performance	4.56	0.57	Outstanding
Weighted Mean			4.66
SD			0.43
Verbal Interpretation			Outstanding

Table 13 shows the level of student's performance in terms of practical tests. This indicated that the students are outstanding ($M=4.46$, $SD=0.43$) among the four folk dances' presentation as part of the assessment in physical education evaluated with the same rubrics target common competencies among students throughout the utilization of mother tongue activity sheets. This denoted that the students showed exemplary performance presented by group and individually that showed proper body movement that meets the standards in dancing specific type of dance.

It is evident that students showed outstanding performance in sequence ($M=4.84$, $SD=0.33$) of dance steps with correct

arrangement of each step and does not forget any single routine. This implied that students in physical education were outstanding in their performances as they already memorize the sequence of the body movement in four folk dance activities provided and does not forget any single steps that may affect the execution of the routine which contribute to the overall performance individually or by group.

Moreover, the students in physical education were considered outstanding in their performance in particular to execution ($M=4.55$, $SD=0.43$) which implied that every students showed appropriate execution of the steps considering the correct posture, hand movement and foot positions.



This showed that upon utilization of mother tongue-based activity sheets, the student's improve their ability to execute body movement among four folk dance discussed by the teacher and presented the activity well in a group with precision in the dance steps and body movement.

Significant Effect of Mother Tongue Activity Sheet on the Students' Cognitive Competency

The significant effect of mother tongue activity sheet on the students' cognitive competency were revealed in the following table, which shows the independent variable, dependent variable, beta coefficient, t-value, p-value and analysis of data.

Table 14 contained data that clarified the degree of relationship on the level of validity of components and features of mother tongue activity sheets to student's cognitive competency.

Table 14 shows the Significant Effect of Mother Tongue Activity Sheet on the Students' Cognitive Competency. In this study, the Validity of Mother Tongue Activity Sheet refers to components and features. In terms of component, this refers to Objective, Content, Demonstration, Activity, and Valuing, and in terms of features refers to Design; Relevance; Usability; and Clarity while the Students' Cognitive Competency, in this study refers to Remembering; Understanding; and applying.

The table shows the beta coefficient respectively as seen in the table. A positive beta coefficient means that an increase in the predictor variable is associated with an increase in the dependent variable, while a negative beta coefficient means that an increase in the predictor variable is associated with a decrease in the dependent variable.

Based on the computed p-value, it is indicated that the components and features of the mother tongue activity sheets has significant effect Students' Cognitive Competency which is less than the level of significant value of 0.05. This indicated that the students cognitive development in physical education subject were influence by the components and features of mother tongue activity sheets as the mother tongue activity sheets supports the students understanding of concept with activities, task and content.

This denoted that as the teachers used mother tongue activity sheets in discussion of folk dance in Physical education, it increases the development of cognitive competencies among learners as they were able to understand the lesson content and recall the concepts while performing different academic task. Therefore, this activity sheet can contribute to developing learners obtaining failing grades in physical education.

Moreover, among the components of the activity sheets, the valuing considered as not significant on the students' development of cognitive competency as it obtained p-value greater than the alpha level of 0.5 denoted as not significant.

This implied that the students' development of the cognitive competencies was not dependent on the inclusion of valuing portion in activity sheets as they were able to attain mastery of competencies and showed cognitive development based on constant practice and engagements on the lesson. So positive results will attain if the learners understand the content of the lesson that needed for them to masters. It will help them also to improved their skills in terms of their practical test.

Table 14 Significant Effect of Mother Tongue Activity Sheet on the Students' Cognitive Competency

	Validity on the Mother Tongue Activity Sheet	Students' Cognitive Competency	Coefficient	t-value	p-value
Components	Objectives	Remembering;	0.454	6.611	0.000
		Understanding	0.408	5.204	0.000
		Applying	0.556	6.408	0.000
	Content	Remembering;	0.531	6.823	0.000
		Understanding	0.419	4.537	0.000
		Applying	0.498	4.607	0.000
	Demonstration	Remembering;	0.578	7.258	0.000
		Understanding	0.455	4.749	0.000
		Applying	0.527	4.665	0.000
Activity	Remembering;	0.623	8.183	0.000	
	Understanding	0.608	7.061	0.000	
	Applying	0.596	5.464	0.000	
Valuing	Remembering;	-0.111	-1.064	0.290	
	Understanding	-0.135	-1.221	0.225	
	Applying	-0.006	-0.0472	0.962	



Features	Design	Remembering;	0.587	8.378	0.000
		Understanding	0.473	5.457	0.000
		Applying	0.505	4.836	0.000
	Relevance	Remembering;	0.589	7.593	0.000
		Understanding	0.521	5.751	0.000
		Applying	0.609	5.723	0.000
	Usability	Remembering;	0.593	8.811	0.000
		Understanding	0.514	6.288	0.000
		Applying	0.5807	5.951	0.000
	Clarity	Remembering;	0.580	7.891	0.000
		Understanding	0.486	5.513	0.000
		Applying	0.598	5.885	0.000

P<0.05

Significant Effect of Mother Tongue Activity Sheet on the Students’ Performance

The significant effect of mother tongue activity sheet on the Students’ Performance were revealed in the following table, which shows the independent variable, dependent variable, beta coefficient, t-value, p-value and analysis of data.

Table 15 contained data that clarified the degree of relationship on the level of validity of components and features of mother tongue activity sheets to student’s cognitive competency.

Table 15 shows the significant effect of mother tongue activity sheet on the students’ cognitive competency. In this study, the validity of mother tongue activity sheet refers to components and features. In terms of component, this refers to Objective,

Content, Demonstration, Activity, and Valuing, and in terms of features refers to Design; Relevance; Usability; and Clarity while the Students’ Performance, in this study refers to Practical Test.

The table shows the beta coefficient respectively as seen in the table. A positive beta coefficient means that an increase in the predictor variable is associated with an increase in the dependent variable, while a negative beta coefficient means that an increase in the predictor variable is associated with a decrease in the dependent variable.

The t-value indicates that there is No Significant Effect of Mother Tongue Activity Sheet on the Students’ Cognitive Competency which is less than the critical t-value of 1.662.

Table 15 Significant Effect of Mother Tongue Activity Sheet on the Students’ Performance

	Validity on the Mother Tongue Activity Sheet	Students’ Performance	Coefficient	t-value	p-value
Components	Objectives	Practical Test	0.081	0.558	0.579
	Content		-0.069	-0.417	0.678
	Demonstration		0.088	0.5037	0.616
	Activity		-0.078	-0.445	0.658
	Valuing		0.176	0.977	0.331
Features	Design	Practical Test	-0.029	-0.180	0.858
	Relevance		-0.030	-0.172	0.864
	Usability		-0.191	-1.203	0.232
	Clarity		-0.177	-1.073	0.286

Constant 1.662

The primary leaving exam covers only four of the curriculum standards, leaving two high-priority topics out, causing a lack

of instructional consistency that negatively impacts student learning, as teachers often teach a wide range of subject matter



and cognitive requirements.

The p-value also indicates that there is No Significant Effect of Mother Tongue Activity Sheet on the Students' Cognitive Competency which is more than the level of significant value of 0.05. This proved that the components and features of mother tongue activity sheets do not influence the student performance in terms of practical tests as they different learning style that may affect the students' performance and understanding. The learning style of the students must consider in designing the component and features of activity sheets making it significant to different types of learning strengths and weaknesses.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings, the study claimed that:

In line with the findings of this study, all the indicators in component of mother tongue activity sheet namely objective, content, demonstration, activity, and valuing were evaluated as strongly agree by the students which they perceived to aid their learning experiences in Folk dances.

The components and features of mother tongue activity sheets upon utilization in the physical education discussion showed significant importance on developing students cognitive competency thus signified the rejection of null hypothesis as students' cognitive development in physical education subject were influence by the components and features of mother tongue activity sheets as it supported the students understanding of concept with activities, task and content and processed the mastery of competencies.

Meanwhile, the components and features of mother tongue activity sheets upon utilization in the physical education discussion showed as not major determinant on developing students' performance in practical examinations thus signified acceptance of null hypothesis as students have different level of execution based their level of understanding and capacity to perform as well as their learning style.

Based on the findings and conclusions made, the following recommendations were forwarded.

1. The school may utilize the activity sheets aligned to the step-by-step procedure of lesson delivery with complete components to address student's difficulty.
2. The teachers are advised to ensure the activity sheets design, relevance, usability, and reliability to assure the student's use of materials as references for the discussion.
3. The teachers may design activities that enhance students' different cognitive competencies to assure holistic development.

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USING THEMATIC APPROACH IN THE LEARNERS' CRITICAL THINKING ABILITIES AND PROBLEM-SOLVING SKILLS

Mary Grace Barbacena Arcega

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study focuses on determining the significant effect on teacher's utilization of Thematic Approach on the learner's critical thinking abilities and problem-solving skills. It seeks to determine the level of Thematic approach, learners' critical thinking abilities and problem-solving skills. The significant difference in the learners' problem-solving skills before and after using the Thematic Approach. The significant effect on teacher's utilization of thematic approach on the learner's critical thinking abilities, and significant effect on the learner's problem-solving skills before and after the teacher's utilization of Thematic Approach.

The study used Quasi-Experimental research design. The research was conducted among the Grade 11 students of Majada In Integrated School during the school year 2023-2024. A purposeful sampling strategy is used to determine the respondents in the study. The research instrument used is the researcher-made survey questionnaire checklist which is prepared, checked, and submitted to reputable experts in the field of the study. A teacher made test is utilized to determine the before and after scores of the respondents and a questionnaire checklist to describe the level of thematic approach and critical thinking abilities.

Most of the learners strongly agree with very highly evident as interpretation of the utilization of the Thematic approach as to integrative, cross curriculum, world relevance and engagement. The level of learners' critical thinking abilities in terms of inference, reflection, creativity, and decision making was also very highly evident. The students' level of problem solving before and after using Thematic Approach has a verbal interpretation of Developing to Approaching Proficiency.

The study shows a significant difference in the students' problem-solving skills before and after using the Thematic Approach. The result also shows that there is a significant effect on teacher's utilization of Thematic Approach on the learner's critical thinking Abilities. Thus, both hypotheses were rejected. The approach has the capacity to help students improve their critical thinking. By utilizing the approach, the students critical thinking, analytical thinking, and evaluating skills can be increased. It was also found out that there is no significant effect on teacher's utilization of Thematic Approach on the learner's problem-solving skills thus the third hypothesis was accepted. The lack of strong effect observed demonstrates that this approach may not be sufficient to produce evident progress in learners' problem-solving skills.

Moreover, the conclusion is drawn from the findings and the following recommendations are hereby given: the teachers may utilize different mathematical teaching approaches to easily understand word problems; learners really need to practice solving word problems in Mathematics and use their valuable time to improve their understanding of the different problems; and for further validity and reliability of the study, it is suggested to conduct the study in a larger group of respondents to determine if the results vary.

KEYWORDS: Thematic Approach; critical thinking abilities; problem-solving skills

1. INTRODUCTION

In a very challenging learning environment that teachers are facing today teachers must be equipped with different learning strategies to deal with difficulties encountered in different classroom situation. Student's ability to solve word problems is deteriorating as shown in quarterly report of least learned competencies. May it be an approach, differentiated instruction or any best practice that the teacher may utilize will be a great help to alleviate students' difficulty in solving word problems and increase their critical thinking abilities.

Thematic instruction lent itself to the philosophy of systems thinking because the curriculum has been presented with the understanding that the learning has been connected, that teachers needed to work collaboratively to solve the problems plaguing the at-risk student, and that the educational system needed to become much more in tune with learning.

These days, the capacity to critically think in mathematics is a crucial foundational skill in schooling. The importance of this ability is not only to fulfil learning objectives and raise students' knowledge of mathematics but also connects in other subjects

and daily life. Development in quality education is seeing the need for pupils to play more active roles in learning. To solve mathematical problems, students must be both critical and logical thinkers who are able to reflect on their own reasoning. Schools should design learning spaces that enable students to delve deeply into subjects they are enthusiastic about. Students are likely to employ less critical thinking skills and have less opportunities to draw connections between the material covered in the classroom and their daily lives when teaching and learning activities are heavily focused on subject topic mastery through memorization of concepts and facts (Salleh 2023)

Therefore, the researcher believed that thematic approach can be useful and meaningful to improve critical thinking skills and problem-solving abilities.

1.1 Statement of the Problem

Specifically, the study sought to answer the following questions:

1. What is the level of using Thematic Approach in terms of:

1.1 integration;



- 1.2. cross-curriculum;
- 1.3. real-world relevance; and
- 1.4. engagement?
2. What is the level of learners' Critical Thinking Abilities in terms of:
 - 2.1. inference;
 - 2.2. reflection;
 - 2.3. creativity; and
 - 2.4. decision making?
3. What is the level of learners' Problem-Solving Skills before and after using Thematic approach in terms of
 - 3.1. critical thinking;
 - 3.2. analyzing; and
 - 3.3. evaluating?
4. Is there a significant difference in the learners' Problem-Solving Skills before and after using the Thematic Approach?
5. Is there a significant effect on teachers' utilization of Thematic Approach on the learners' Critical Thinking Abilities?
6. Is there a significant effect on teachers' utilization of Thematic Approach on the learners' Problem-Solving Skills?

2. METHODOLOGY

Descriptive research design was chosen in the study since the goal was to determine "what is" the current situation, specifically how assessments vary. With the use of a survey questionnaire that served as the data source, it evaluated the level of Thematic approach implemented by the teacher, as well as the students' level of critical thinking ability and problem-solving skills. According to Pandey (2021) the descriptive technique, commonly referred to as statistical research, describes information about the populations or phenomena

under study, including data and characteristics. Additionally, frequencies, averages, and other statistical computations are performed using this methodology. Often, doing a survey investigation is the best course of action before publishing a descriptive study.

3. RESULTS AND DISCUSSION

This chapter deals with presentation, analysis, and interpretation of the data. The researcher provided tables that summarize the responses of the respondents and discuss the findings of the study based on the research questions.

Level of Using Thematic Approach

The level of using Thematic Approach was assessed by the respondents in terms of integration, cross-curriculum, real-world relevance, and engagement. The level of Thematic Approach was revealed in the following tables which shows the statement, Mean, Standard Deviation, remarks, and Verbal Interpretation.

Table 1 shows the level of the Thematic Approach in terms of Integration. It shows that the respondents Strongly Agree that the researcher uses other references to connect learners' interests, cultures, and family traditions as part of the learning experiences which gained the highest (M=4.64 S.D.=0.50), provides integrative material that supports student-centered learning (M=4.53 S.D. = 0.61), utilizes examples related to other subjects and having the same concept (M=4.50 S.D. =0.63), collaborates with other subject teachers in constructing performance tasks (M= 4.48 S.D.=0.58), integrates topics with relevant issues in society for more effective discussion (M=4.43 S.D.=0.63). It also reveals that the extent of Thematic Approach Is very highly evident supported by the grand (M=4.52 S.D.= 0.59).

Table 1 Level of Using Thematic Approach in terms of Integration

STATEMENT	MEAN	SD	REMARKS
The teacher... <i>...utilizes examples related to other subjects and having the same concept.</i>	4.50	0.63	Strongly Agree
<i>...uses other references to connect learners' interests, cultures, and family traditions etc., as part of the learning experience.</i>	4.64	0.50	Strongly Agree
<i>...integrates topics with relevant issues in society for more effective discussion.</i>	4.43	0.63	Strongly Agree
<i>...collaborates with other subject teachers in constructing performance tasks.</i>	4.48	0.58	Strongly Agree
<i>...provides integrative material that supports student-centered learning.</i>	4.53	0.61	Strongly Agree
Weighted Mean		4.52	
SD		0.59	
Verbal Interpretation			Very Highly Evident

The researcher was able to utilize Thematic Approach in terms of Integration by integrating topics with relevant issues, collaborates with other subjects having the same concept. and providing material that supports student-centered learning.

The level of Thematic Approach was assessed by the respondents in terms of Cross Curriculum as shown in the following table having the Mean, Standard Deviation, and its verbal interpretation.



Table 2. Level of Teacher’s Utilization of Thematic Approach in terms of Cross Curriculum

STATEMENT	MEAN	SD	REMARKS
The teacher...			
...gave clearly defined theme aligned with the performance standard.	4.51	0.50	Strongly Agree
...uses multiple material that supports learning.	4.61	0.53	Strongly Agree
...uses strategies to connect the topic with other subjects.	4.50	0.60	Strongly Agree
...collaborates with other subjects that shows integration across the discipline.	4.45	0.63	Strongly Agree
...provide opportunities for a better learning experience.	4.55	0.67	Strongly Agree
Weighted Mean		4.52	
SD		0.59	
Verbal Interpretation			Very Highly Evident

Table 2 shows the level of Thematic Approach in terms of cross curriculum. It shows that the respondents Strongly Agree that the researcher uses multiple material that supports learning (M=4.61 S.D=0.53), provide opportunities for a better learning experience (M=4.55 S.D=0.67), gave clearly defined theme aligned with the performance standard. (M=4.51 S.D=0.50), uses strategies to connect the topic with other subjects (M=4.50 S.D.=0.60), collaborates with other subjects that show integration across the discipline (M=4.45 S.D. =0. 63). This implies that the researcher implementation of Thematic Approach in terms of Cross Curriculum was very highly evident supported by the grand (M= 4.52 S.D. = 0.59).

Likewise, the teacher utilized the Thematic approach in terms of cross curriculum by giving clearly defined theme aligned with the performance standard, using multiple material that supports learning, strategies to connect topics with other subjects, collaborates with other subjects that shows integration

across discipline, and provide opportunities for better learning experiences.

Table 3 shows level of teachers’ utilization of Thematic Approach in terms of Real-World Relevance. It shows that the respondents Strongly Agree that the researcher uses problems/ideas to create scenario that they might encounter in the future (M=4.71 S.D=0.53), creates theme based on the most essential learning competency (M=4.52 S.D.=0.54), gave performance task with real-life application (M=4.50 S.D.=0.63), involves students in creating problems based on authentic situations (M=4.48 S.D.=0.63), uses practical problems related to everyday life (M=4.35 S.D.=0.80). This implies that the researcher implementation of Thematic Approach in terms of Real-World Relevance was very highly evident supported by the grand (M=4.51 S.D.=0.64).

Table 3. Level of Teacher’s Utilization of Thematic Approach in terms of Real-World Relevance

STATEMENT	MEAN	SD	REMARKS
The teacher...			
...uses practical problems related to everyday life.	4.35	0.80	Strongly Agree
...creates theme based on the most essential learning competency.	4.52	0.54	Strongly Agree
...gave performance task with real-life application.	4.50	0.63	Strongly Agree
...involves students in creating problems based on authentic situations.	4.48	0.63	Strongly Agree
...uses problems/ideas to create scenario that they might encounter in the future.	4.71	0.53	Strongly Agree
Weighted Mean		4.51	
SD		0.64	
Verbal Interpretation			Very Highly Evident

The teacher utilized Thematic Approach in terms of real-world relevance by using practical problems related to everyday life, creates theme based on the most essential learning competency, gave performance task based on real-life application, involve students in creating problems based on authentic situations, and using problems to create scenario that they might encounter in the future.

The level of Thematic Approach was assessed by the respondents in terms of Engagement as shown in the following table having the Mean, Standard Deviation, and its verbal interpretation.



Table 4 Level of Teacher’s Utilization of Thematic Approach in terms of Engagement

STATEMENT	MEAN	SD	REMARKS
The teacher... <i>...presentation is engaging and relatable.</i>	4.49	0.60	Strongly Agree
<i>...material encourages deep exploration of theme/ideas.</i>	4.42	0.65	Strongly Agree
<i>...activities help students solve complex problem.</i>	4.52	0.63	Strongly Agree
<i>...instructional method engage student through project.</i>	4.31	0.75	Strongly Agree
<i>...consideration to students access to tools for a better teaching learning experience is evident.</i>	4.54	0.63	Strongly Agree
Weighted Mean		4.46	
SD		0.66	
Verbal Interpretation			Very Highly Evident

Table 4 shows the level of Thematic Approach in terms of Engagement. It shows that the respondents Strongly Agree that the researcher considered students access to tools for a better teaching learning experience is evident (M=4.54 S.D.=0.63), gave activities that help students solve complex problem (M=4.52 S.D.=0.63), presentation is engaging and relatable (M=4.49 S.D. =0.60), involves students in creating problems based on authentic situations (M= 4.49 S.D.=0.63), instructional material encourages deep exploration of theme/ideas (M=4.31 S.D.=0.75).

The researchers’ implementation of Thematic Approach in

terms of Engagement was very highly evident supported by the grand (M=4.46 S.D.=0.66), this implies that learners were engaged in the activities in the Thematic Approach.

Level of Learners’ Critical Thinking Abilities

The respondents assessed their level of Critical Thinking Abilities in terms of Inference, Reflection, Creativity and Decision Making. The level of Critical thinking Abilities was revealed in the following tables which shows the statement, Mean, Standard Deviation, remarks, and Verbal Interpretation.

Table 5 Level of Learners’ Critical Thinking Abilities in terms of Inference

STATEMENT	MEAN	SD	REMARKS
I can... <i>...draw conclusion from a given information.</i>	4.48	0.61	Strongly Agree
<i>...interpret problem and deduce information.</i>	4.47	0.55	Strongly Agree
<i>...evaluate the given in a complex problem.</i>	4.47	0.57	Strongly Agree
<i>...connect pieces of information to solve problem.</i>	4.40	0.59	Strongly Agree
<i>...analyze data and its complexities to arrive at a correct solution.</i>	4.50	0.60	Strongly Agree
Weighted Mean		4.47	
SD		0.59	
Verbal Interpretation			Very Highly Evident

Table 5 shows the level of Critical Thinking Abilities in terms of Inference. It shows that the respondents Strongly Agree that they can analyze data and its complexities to arrive at a correct solution (M=4.50 S.D.=0.60), draw conclusion from a given information (M=4.48 S.D.=0.61), interpret problem and deduce information (M= 4.47 S.D. =0.55), evaluate the given in a complex problem (M=4.47 S.D.=0.57), connect pieces of information to solve problem (M=4.40 S.D.=0.59). This meant that the Learner’s Critical Thinking In terms of Inference was very highly evident supported by the grand (M= 4.47 S.D. = 0.59).

The respondents assessed their level of Critical Thinking Abilities in terms of Reflection as shown in the following table

having the Mean, Standard Deviation, and its verbal interpretation.

Table 6 shows the level of Critical Thinking Abilities in terms of Reflection. It shows that the respondents Strongly Agree that they can evaluate/examine the validity of their own thinking (M=4.57 S.D.=0.51), create reflections based on my own thinking (M=4.51 S.D.=0.59), reflect on the connection of the theme in my learning (M=4.43 S.D.=0.58),use language to convey my thoughts effectively (M=4.38 S.D.=0.60),apply insights gained from reflections to future actions/learning (M=4.29 S.D.=0.59).This meant that the Learner’s Critical Thinking In terms of Reflection was very highly evident supported by the grand (M=4.43 S.D.= 0.58).



Table 6 Level of Learners' Critical Thinking Abilities in terms of Reflection

STATEMENT	MEAN	SD	REMARKS
I can...			
<i>...reflect on the connection of the theme in my learning</i>	4.43	0.58	Strongly Agree
<i>...use language to convey my thoughts effectively.</i>	4.38	0.60	Strongly Agree
<i>...evaluate/examine the validity of my own thinking.</i>	4.57	0.51	Strongly Agree
<i>...create reflections based on my own thinking.</i>	4.51	0.59	Strongly Agree
<i>...apply insights gained from reflections to future actions/learning.</i>	4.29	0.59	Strongly Agree
Weighted Mean		4.43	
SD		0.58	
Verbal Interpretation			Very Highly Evident

The respondents assessed their level of Critical Thinking Abilities in terms of Creativity as shown in the table having the Mean, Standard Deviation, and its verbal interpretation.

Table 7 shows that the respondents Strongly Agree that they can elaborate concepts through unique responses (M=4.52 S.D. = 0.57), provide multiple solutions to a problem (M=4.50

S.D.=0.67), adapt ideas in solving problems (M= 4.49 S.D. =0.50), generate original ideas related to a given theme (M=4.46 S.D.=0.64), innovate and explain how I arrive at this innovation (M=4.46 S.D.=0.66). This meant that the Learner's Critical Thinking In terms of Creativity was very high supported by the grand (M= 4.49 S.D. = 0.61).

Table 7. Level of Learners' Critical Thinking Abilities in terms of Creativity

STATEMENT	MEAN	SD	REMARKS
I can...			
<i>...generate original ideas related to a given theme.</i>	4.46	0.64	Strongly Agree
<i>...provide multiple solutions to a problem.</i>	4.50	0.67	Strongly Agree
<i>...elaborate concepts through unique responses.</i>	4.52	0.57	Strongly Agree
<i>...innovate and explain how I arrive at this innovation</i>	4.46	0.66	Strongly Agree
<i>...adapt ideas in solving problems.</i>	4.49	0.50	Strongly Agree
Weighted Mean		4.49	
SD		0.61	
Verbal Interpretation			Very Highly Evident

The learners can provide multiple solutions to problem, elaborate concepts through unique responses, innovate and explain how they arrive at certain innovations, generate original ideas related to a given theme and adapt ideas in solving problems.

The respondents assessed their level of Critical Thinking Abilities in terms of Decision Making as shown in the table having the Mean, Standard Deviation, and its verbal interpretation.

Table 8 shows that the respondents Strongly Agree that they can evaluate options and make reasoned choices (M=4.51 S.D.=0.55), identify biases and analyze outcomes (M= 4.50 S.D. =0.57), provide alternative and assess their quality (M=4.49 S.D.=0.63), consider consequences and justify their decision (M=4.48 S.D. = 0.66). On the other hand, the respondents agree that they can defend their viewpoints with sound reasoning and judgement (M=4.17 S.D.=0.66). This meant that the Learner's Critical Thinking In terms of Creativity was very highly evident supported by the grand (M= 4.43 S.D. = 0.63).

Table 8. Level of Learners' Critical Thinking Abilities in terms of Decision Making

STATEMENT	MEAN	SD	REMARKS
I can...			
<i>...evaluate options and make reasoned choices.</i>	4.51	0.55	Strongly Agree
<i>...consider consequences and justify my decision.</i>	4.48	0.66	Strongly Agree
<i>...provide alternative and assess their quality.</i>	4.49	0.63	Strongly Agree
<i>...defend my viewpoints with sound reasoning and judgement.</i>	4.17	0.66	Agree
<i>...identify biases and analyze outcomes.</i>	4.50	0.57	Strongly Agree
Weighted Mean		4.43	
SD		0.63	
Verbal Interpretation			Very Highly Evident



The respondents strongly agreed that they have a very high level of Critical Thinking Abilities in terms of Inference, Reflection, Creativity and Decision Making

Level of Learners’ Problem-Solving Skills

The level of Learners’ Problem-Solving Skills before using Thematic Approach refers to Problem Solving Skills in terms of Critical Thinking, Analyzing, and Evaluating skills. The following table shows the interval of scores, frequency, percentage of frequency, mean, standard deviation, and Verbal Interpretation.

Table 9 Level of Learners’ Problem-Solving Skills in terms of Critical Thinking

Score	Assessment	Frequency	Percentage	Descriptive Value
9-10	Pre-test	0	0%	Outstanding
	Posttest	4	4%	
7-8	Pre-test	3	3%	Very Satisfactory
	Posttest	24	21%	
5-6	Pre-test	40	36%	Satisfactory
	Posttest	61	54%	
3-4	Pre-test	46	41%	Fairly Satisfactory
	Posttest	22	20%	
0-2	Pre-test	23	21%	Did Not Meet Expectation
	Posttest	1	1%	
Mean	Pre-test	3.91	Interpretation	Developing
	Posttest	5.63		Approaching Proficiency

Table 9 shows the level of Learners’ Problem-Solving Skills before and after using Thematic Approach. It reveals the Learners’ Problem-Solving Skills in terms of Critical Thinking.

The Learners’ Level of Problem-Solving Skills in terms of Critical Thinking obtained a Mean of 3.91 (Developing) and 5.63 (Approaching proficiency) before and after using the Thematic approach respectively. This meant that there is a minimal increase in the students’ scores.

Table 10 shows the level of Learners’ Problem-Solving Skills before and after using Thematic Approach. It reveals the Learners’ Problem-Solving Skills in terms of Analyzing.

Table 10 Level of Learners’ Problem-Solving Skills in terms of Analyzing

Score	Assessment	Frequency	Percentage	Descriptive Value
9-10	Pre-test	0	0%	Outstanding
	Posttest	9	8%	
7-8	Pre-test	4	4%	Very Satisfactory
	Posttest	17	15%	
5-6	Pre-test	12	11%	Satisfactory
	Posttest	57	51%	
3-4	Pre-test	62	55%	Fairly Satisfactory
	Posttest	24	21%	
0-2	Pre-test	34	30%	Did Not Meet Expectation
	Posttest	5	4%	
Mean	Pre-test	3.27	Interpretation	Developing
	Posttest	5.59		Approaching Proficiency

The Learners’ Level of Problem-Solving Skills in terms of Analyzing obtained a Mean of 3.27 (Developing) and 5.59 (Approaching proficiency) before and after using the Thematic approach respectively. This meant that there is a minimal increase in the students’ scores.

Table 11 shows the level of Learners’ Problem-Solving Skills before and after using Thematic Approach. It reveals the

Learners’ Problem-Solving Skills in terms of Evaluating.



The Learners' Level of Problem-Solving Skills in terms of Evaluating obtained a Mean of 4.08 (Developing) and 6.18 (Approaching proficiency) before and after using the Thematic

approach respectively. This meant that there is a minimal increase in the students' scores.

Table 11 Level of Learners' Problem-Solving Skills in terms of Evaluating

Score	Assessment	Frequency	Percentage	Descriptive Value
9-10	Pre-test	0	0%	Outstanding
	Posttest	10	9%	
7-8	Pre-test	6	5%	Very Satisfactory
	Posttest	33	29%	
5-6	Pre-test	40	36%	Satisfactory
	Posttest	60	54%	
3-4	Pre-test	44	39%	Fairly Satisfactory
	Posttest	7	6%	
0-2	Pre-test	22	20%	Did Not Meet Expectation
	Posttest	2	2%	
Mean	Pre-test	4.08	Interpretation	Developing
	Posttest	6.18		Approaching Proficiency

To test the significant difference in the learners' Problem-Solving Skills before and after using the Thematic Approach the data was statistically treated by paired t-test. The table shows the critical t-value and p-value.

10.54, 12.62 and 13.51 for Critical thinking, Analyzing and Evaluating respectively. The computed t-value is greater than the critical value of 1.98, this means that Thematic approach can be an effective approach to improve problem solving skills. By utilizing this approach, the students critical thinking, analytical thinking and evaluating skills can be increased.

Table 12 shows the Difference Between Before and After Using the Thematic Approach.

It showed a significant difference with the computed t-value of

Table 12 Difference Between Before and After Using the Thematic Approach

Problem-Solving Skills	Mean	Mean Difference	Computed t-value	Analysis
Critical Thinking				
Before	3.91	1.72	10.54	Significant
After	5.63			
Analyzing				
Before	3.27	2.32	12.62	Significant
After	5.59			
Evaluating				
Before	4.08	2.10	13.51	Significant
After	6.18			

Note: * $t > 1.98$ is statistically significant.

Table 13 shows the results of the statistical analysis on the Significant Effect on Teacher's Utilization of Thematic Approach on the Learner's Critical Thinking Abilities. The Thematic Approach using Engagement shows a significant positive effect on all the components of Critical Thinking Abilities such as Inference, Reflection, Creativity and Decision Making (p=0.000;0.000;0.023;0.000). Moreover, some

components, such as Integration, Cross Curriculum and Real-World relevance show a statistically significant positive effect on students' Critical Thinking Abilities in their Inference, Creativity and Decision Making having the p-value that is less than 0.05 level of significance. This implies that the approach led to a significant improvement of students' critical thinking abilities.



Table 13 Significant Effect on Using Thematic Approach on the Learner’s Critical Thinking Abilities

Thematic Approach	Critical Thinking Abilities	T-Value	P-Value
Integration	Inference	2.8	0.006*
	Reflection	1.07	0.287
	Creativity	2.49	0.014*
	Decision Making	2.67	0.009*
Cross Curriculum	Inference	2.04	0.044*
	Reflection	0.80	0.425
	Creativity	2.02	0.046*
	Decision Making	2.48	0.015*
Real-World Relevance	Inference	2.91	0.004*
	Reflection	0.99	0.325
	Creativity	2.97	0.004*
	Decision Making	0.87	0.386
Engagement	Inference	5.32	0.000*
	Reflection	10.89	0.000*
	Creativity	2.31	0.023*
	Decision Making	4.28	0.000*

Note: * $p < .05$ is statistically significant.

Table 13 also shows the p-value of some indicators that resulted not significant such as Integration, Cross curriculum, Real World Relevance in students’ reflection ($p=0.287; 0.425;0.325$). Additionally Real-World Relevance also reveals not significant in Decision Making having the p-value of 0.386 that is greater than the 0.05 level of significance.

To test the significant effect on teacher’s utilization of Thematic Approach of the learner’s Problem-Solving Skills, data were treated statistically using Regression Analysis which shows the degrees of freedom and p-value of the data.

Table 14 presents the results of the statistical analysis on the Significant Effect on Teacher’s Utilization of Thematic

Approach in terms of Integration, cross curriculum, real world-relevance, and engagement on the learner’s Problem-Solving Skills in terms of critical thinking skills, analyzing skills and evaluating skills.

In connection with the findings the Thematic Approach using Integration, Cross Curriculum, Real World Relevance and Engagement resulted not significant with the Problem-Solving skills such as Critical Thinking, Analyzing and Evaluating having the p-value of greater than 0.05 level of significance. This implies that the approach has no significant effect on the students’ Problem-solving skills.

Table 14. Significant Effect on Teacher’s Utilization of Thematic Approach on the Learner’s Problem-Solving Skills

Thematic Approach	Problem-Solving Skills	T-Value	P-value
Integration	Critical Thinking	0.18	0.854
	Analyzing	0.83	0.408
	Evaluating	0.17	0.862
Cross Curriculum	Critical Thinking	1.22	0.225
	Analyzing	0.67	0.503
	Evaluating	1.21	0.230
Real-World Relevance	Critical Thinking	0.19	0.236
	Analyzing	1.40	0.165
	Evaluating	0.23	0.820
Engagement	Critical Thinking	0.31	0.780
	Analyzing	1.74	0.085
	Evaluating	0.65	0.519

Note: * $p < .05$ is statistically significant.



4. CONCLUSION AND RECOMMENDATIONS

Based on the finding of the study, the following conclusions were drawn:

There is a significant difference in the students' Problem-Solving Skills before and after using the Thematic Approach, thus the null hypothesis is rejected. Therefore, it can be concluded that Thematic approach can be used as a strategy and intervention to improve learners' Problem-solving skills.

There is a significant effect on teacher's utilization of Thematic Approach on the learner's Critical thinking Abilities. Thus, the null hypothesis is rejected. Highlighting the significance of considering the varieties of instructional methods and interventions is a major factor to improve learners Critical thinking Skills.

There is no significant effect on teacher's utilization of Thematic Approach on the learner's Problem-Solving Skills then the null hypothesis is accepted. The lack of strong impact observed with Thematic Approach demonstrates that solely utilizing the approach may not be sufficient to produce evident progress in Problem-Solving Skills.

In light from the conclusion drawn from the findings, the following recommendations were hereby given:

1. To secure a fresh approach to teach Problem Solving, the Mathematics department has the opportunity to spread the study's result. They may incorporate new strategies into their teaching practices.
2. The study's findings create an opportunity to organize webinars across different learning area and may develop students Critical Thinking Abilities and Problem-Solving Skills.
3. The teachers may utilize different mathematical teaching approaches to easily understand word problems.

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LEARNING COMPETENCIES INFLUENCE ON THE WORK BEHAVIOR AND PERFORMANCE OF TECHNOLOGY AND LIVELIHOOD EDUCATION STUDENTS

Melanie De Silva De Guia

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This descriptive study aimed to determine the learning competencies, the work behavior and performance of Technology and Livelihood Education students. Specifically, it determined the level of the students' learning competencies in cognitive, technical, work, entrepreneurial, and interpersonal skills; extent of students' work behavior and work habits, responsibilities, teamwork, commitment, and initiative; level of students' performance in the practical tests; the relationship between students' learning competencies and work behavior; and the effect of students' learning competencies on students' performance in the practical tests.

This study employed a quantitative correlational research design. A questionnaire was developed, tested for reliability and validity, and administered to two hundred Grade 9 students from Pag-asa National High School selected using simple random sampling. The questionnaire consisted of two parts that assess the level of students' learning competencies and the extent of their work behavior. Students' performance was evaluated using a standard rubric from the DepEd learning module in practical tests. Responses were scored using the Five-Point Likert scale and were tabulated, analyzed, and interpreted using the mean and standard deviation.

Salient findings revealed a high level of students' learning competencies in cognitive, technical, work, entrepreneurial, and interpersonal skills. Additionally, the extent of students' work behavior in terms of work habits, responsibility, teamwork, commitment, and initiative were high students' performance in the practical test was marked high. Moreover, a significant relationship existed between students' learning competencies and work behavior. Lastly, the effect of students' learning competencies on their performance in practical tests had a significant effect on cognitive skills, while their learning competencies in technical, work, entrepreneurial, and interpersonal skills did not have a significant effect.

It is concluded that positive work behavior is crucial for students to apply academic knowledge effectively, create a conducive learning environment, and prepare for success in the workforce. The students' learning competencies significantly affect their cognitive skills in practical tests, but not in technical, work, entrepreneurial, and interpersonal skills. This implies that these skills may not be directly reflected in standardized assessments used in practical tests; thus, the research hypothesis was accepted.

KEYWORDS: learning competencies; work behavior; performance

1. INTRODUCTION

The rapid advancement of new and advanced technology globally has led to a growing demand for highly skilled students at applying job-related technologies and having technical and livelihood learning competencies to gain knowledge and introduce creative solutions.

Additionally, to be globally competitive, learners must not only be equipped with fundamental learning competencies but must also possess behavioral competencies to build the skills necessary to prepare students for later grade levels and, finally, for lifelong learning. An effective Technology and Livelihood Education (TLE) program enhances students' competence by focusing on knowledge, entrepreneurial concepts, work ethics, and life skills. The TLE course is said to be founded on the cognitive, affective, behavioral, psychomotor, and affective dimensions of human development. Therefore, focusing solely on the mastery of processes and abilities without the proper work behavior is useless and meaningless.

The examination of disciplinary behaviors and academic achievement in a school setting has become a key issue within

the educational community (Claver et al., 2020). Likewise, Valera (2015) believed that education and performance of the workforce, which is dominated by a set of behaviors, attitudes, practices, skills, and social ties, are essential to the country's aspirations for advancement and development.

Understanding the relationship between how learners behave and their learning competencies is essential for both their overall academic success and personal growth, as revealed in the study of Real and Bermio (2016), which emphasizes that work attitudes greatly impact students' performance.

The researcher seems to believe that work behavior and competencies are critical concepts for students to perform well, successfully, efficiently, and consistently. Therefore, it is relevant to look at the behavior manifesting during students' hands-on activities guided by the implementation of the Republic Act No. 10533, also referred to as Enhanced Basic Education Act of 2013, to prepare students to become globally competitive with their acquired skills.



From the above information, it was therefore imperative for the researcher to conduct a study on learning competencies related to the work behavior and performance of TLE students, with the view that research findings would be of great value to principals, teachers, students, and future researchers.

1.1 Statement of the Problem

Significantly, it aimed to answer the following questions:

1. What is the level of students' learning competencies in terms of:
 - 1.1 cognitive skills
 - 1.2 technical skills
 - 1.3 work skills
 - 1.4 Entrepreneurial Skills and
 - 1.5 interpersonal skills?
2. What is the extent of students' work behavior in terms of:
 - 2.1 work habits
 - 2.2 responsibility
 - 2.3 teamwork
 - 2.4 commitment
 - 2.5 initiative?
3. What is the level of students' performance in terms of practical tests?
4. Is there a significant relationship between students' learning competencies and work behavior?
5. Is there a significant effect of students' learning competencies on students' performance?

2. METHODOLOGY

This study employed a quantitative, correlational research design. Correlational research is a quantitative method that involves analyzing two or more quantitative variables within the same group of subjects. Quantitative research involves quantifying and analyzing variables to obtain results by utilizing and analyzing numerical data with specific statistical techniques (Apuke, 2017).

This design is suitable for the above topic as it requires the researcher to collect data based on the participants' learning competencies and work behavior when conducting the study. Statistical analysis was applied to interpret the numbers obtained from the data.

3. RESULTS AND DISCUSSION

This chapter presents the gathered data in tabular presentation, analysis, and interpretation of findings based on the results of the statistical treatment applied. The data are organized in sequential order based on the statement of the problem in Chapter 1.

The following tabular presentations and discussions characterizes the level of students learning competencies in terms of: cognitive skills; technical skills; work skills; entrepreneurial skills; and interpersonal skills; the extent of students work behavior in terms of work habits; responsibility; teamwork; commitment; and initiative; the level of students' performance in practical test; the significant relationship between students' learning competencies and work behavior; and the effect of students' learning competencies on their performance in practical test.

The analysis and interpretation of data is carried out in two phases. The first part, which is based on the results of the self-made questionnaire, deals with a quantitative analysis of data.

The second part is based on the results of the students in practical test.

Level of Students Learning Competencies

Table 1 shows the level of students learning competencies in cognitive, technical, work, entrepreneurial, and interpersonal skills.

The data were treated statistically using mean and standard deviation.

Table 1 Level of Students Learning Competencies in Terms of Cognitive Skills

STATEMENTS	MEAN	SD	REMARKS
<i>Participate in classroom presentations or discussions actively without being distracted from other things.</i>	3.93	0.91	Agree
<i>Explore and understand how ideas are connected.</i>	3.97	0.87	Agree
<i>Justify and explain own knowledge about the certain lesson and/or topic.</i>	3.75	0.97	Agree
<i>Apply learned concepts</i>	4.06	0.88	Agree
<i>Learn different concepts independently.</i>	3.82	0.91	Agree
Weighted Mean	3.90		
SD	0.91		
Verbal Interpretation	high		

The statement "Applied learning concepts" yielded the highest mean score (M = 4.06 and SD = 0.88) on the other hand, the statement "Justify and explain own knowledge about the certain lesson and/or topic received the lowest mean score (M = 3.75 and SD = 0.97) yet it still indicates a high level of students

learning competencies in terms of cognitive skills by the learners. This implies that students need to enhance their skills in articulating their ideas to overcome obstacles that hinder their ability to explain concepts clearly.

The level of students learning competencies in terms of



cognitive skills attained a weighted mean score of 3.90 and a standard deviation of 0.91 and was verbally interpreted as *high* among the respondents. Clearly this shows that students benefit

from hands-on activities by applying learned concepts in real-world scenarios thus, improving students understanding and retention of knowledge.

Table 2 Level of Students Learning Competencies in Terms of Technical Skills

STATEMENTS	MEAN	SD	REMARKS
<i>Plan and organize a project and its resources.</i>	4.08	0.90	Agree
<i>Focus attention to detail resulting in stronger and effective understanding of the topic.</i>	3.95	0.98	Agree
<i>Write on a specific topic with guidance, instruction, and explanation</i>	3.69	1.00	Agree
<i>Collect, examine, and analyze large amount of data insights.</i>	3.62	1.00	Agree
<i>Accomplish complex action, tasks and processes.</i>	3.95	0.93	Agree
Weighted Mean	3.86		
SD	0.96		
Verbal Interpretation	High		

Table 2 shows the level of students learning competencies in technical skills. It also shows mean and standard deviation. The statement “Plan and organize a project and its resources” yielded the highest mean score of (M = 4.08 and SD = 0.90). However, “Collect, examine, and analyze large amount of data insights obtained the lowest mean score (M = 3.62 and SD = 1.00) yet it still indicates a high level of students learning competencies in terms of technical skills by the learners.

The level of students learning competencies in terms of technical skills attained a weighted mean score of 3.86 and a standard deviation of 0.96 and was verbally interpreted as *high* among the respondents. This further means that students have developed time management skills, task prioritization, and efficient resource utilization through Technology and Livelihood Education subject.

Table 3 Level of Students Learning Competencies in Terms of Work Skills

STATEMENTS	MEAN	SD	REMARKS
<i>Work effectively either individual or with a team.</i>	4.27	0.92	Strongly Agree
<i>Act according to the needs and nature of the work.</i>	4.06	0.91	Agree
<i>Engage in various kinds of work and enthusiastically learned skills from it.</i>	3.99	0.92	Agree
<i>Build connection among other person involve in the group and show leadership skills.</i>	4.02	0.95	Agree
<i>Solve real-life problems according to own knowledge, skills and capabilities.</i>	4.15	0.94	Agree
Weighted Mean	4.10		
SD	0.93		
Verbal Interpretation	High		

Table 3 shows the level of students learning competencies in terms of work skills. Also shows the statements, mean, standard deviation and remarks.

= 3.99 and SD = 0.92). While the mean is slightly lower (M = 3.99 and SD=0.92), it still indicates a high level of students learning competencies in terms of work skills by the learners.

The statement “Work effectively either individual or with team” obtained the highest mean (M = 4.27 and SD = 0.92) with the verbal interpretation of “Strongly Agree”. On the other hand, the statement “Engage in various kinds of work and enthusiastically learned skills from it” got the lowest mean (M

The level of students learning competencies in terms of work skills attained a weighted mean score of 4.10 and a standard deviation of 0.93 and was verbally interpreted as *high* among the respondents. This implies a high level of students work efficiency alone or with other members in the classroom.

Table 4 Level of Students Learning Competencies in Terms of Entrepreneurial Skills.

STATEMENTS	MEAN	SD	REMARKS
<i>Improve literacy in terms of finances and budgeting.</i>	3.83	0.92	Agree
<i>Willingness to take risk and able to be resilient in times of challenges.</i>	3.96	0.96	Agree
<i>Enhance communication and networking strategies.</i>	3.95	0.95	Agree
<i>Enhance creative and critical thinking skills.</i>	3.93	0.93	Agree
<i>Think strategically and plan according to what is needed on the workplace.</i>	4.16	0.87	Agree



Weighted Mean	3.96
SD	0.92
Verbal Interpretation	High

Table 4 shows the level of students learning competencies in terms of entrepreneurial skills. Also shows the statements, mean, standard deviation and remarks.

The statement “Think strategically and plan according to what is needed on the workplace” received the highest mean (M = 4.16 and SD = 0.87). However, “Improve literacy in terms of finances and budgeting” obtained the lowest mean (M = 3.83 and SD = 0.92). While the mean is slightly lower it still indicates a high level of students learning competencies in terms of entrepreneurial skills.

The level of students learning competencies in terms of entrepreneurial skills attained a weighted mean score of 3.96 and a standard deviation of 0.92 and was verbally interpreted as high among the respondents. Students demonstrate a high level of strategic planning skills for positive outcomes. They understand the importance of planning to manage their time, set goals, and stay organized. On the other hand, learners still need improvement in balancing finances for better outcome as financial worries and time constraints hinder their ability to focus on studies.

Table 5 Level of Students Learning Competencies in Terms of Interpersonal Skills

STATEMENTS	MEAN	SD	REMARKS
<i>Listens with other people’s opinion and perspectives.</i>	4.47	0.76	Strongly Agree
<i>Make a healthy and effective conversation with other people.</i>	4.25	0.85	Strongly Agree
<i>Share knowledge and ideas with the people around.</i>	4.11	0.91	Agree
<i>Provide positive useful response for every situation.</i>	4.02	1.00	Agree
<i>Give constructive feedback and resolve conflicts whenever it is needed.</i>	3.96	0.95	Agree
Weighted Mean	4.16		
SD	0.89		
Verbal Interpretation	high		

Table 5 shows the level of students learning competencies in terms of interpersonal skills. Also shows the statements, mean, standard deviation and remarks.

The statement “Listens with other people’s opinion and perspectives” obtained the highest mean (M = 4.47 and SD = 0.76). On the other hand, “Give constructive feedback and resolve conflicts whenever it is needed” received slightly lower mean (M = 3.96 and SD = 0.95). This implies that students exhibit strong communication skills by actively listening to others' opinions and perspectives, which is essential for effective collaboration and mutual understanding. However, there is room for improvement in providing constructive feedback that is both honest and supportive, which is crucial for personal and peer development indicating a need for

enhancement in interpersonal skills.

The level of students learning competencies in terms of interpersonal skills attained a weighted mean score of 4.16 and a standard deviation of 0.89 and was verbally interpreted as high among the respondents.

Extent of Students’ Work Behavior

The extent of students’ work behavior in terms of work habits, responsibility, teamwork, commitment, and initiative was treated statistically using the mean and standard deviation.

Table 6 shows the extent of students work behavior in terms of work habits. Also shows the statements, mean, standard deviation and remarks.

Table 6 Extent of Students’ Work Behavior in Terms of Work Habits

STATEMENTS	MEAN	SD	REMARKS
<i>Anticipate the needs in the work and be proactive.</i>	3.92	0.88	Agree
<i>Seek new opportunities and be persistent on achieving goals.</i>	4.09	0.91	Agree
<i>Demand for efficiency and quality and work for it.</i>	4.03	0.84	Agree
<i>Manage time effectively and ensure the organizational skills are being practice.</i>	3.88	0.91	Agree
<i>Demonstrate accountability and results orientation.</i>	3.78	0.96	Agree
Weighted Mean	3.94		
SD	0.90		
Verbal Interpretation	High		

The statement “Seek new opportunities and be persistent on achieving goals” obtained the highest mean (M = 4.09 and SD=0.91) indicates a high extent of students’ persistence in seeking new and potential opportunities in achieving goals. On

the other hand, learners still need to demonstrate accountability for the quality and result of work. While the mean is slightly lower (M = 3.78 and SD=0.96), it still indicates a high extent of students work behavior in terms of work habits by the learners.



The extent of students work behavior in terms of work habits attained a weighted mean score of 3.94 and a standard deviation

of 0.90 and was verbally interpreted as *high* among the respondents.

Table 7 Extent of Students' Work Behavior in Terms of Responsibility

STATEMENTS	MEAN	SD	REMARKS
Ensure expectations are clear and maintain accountability.	4.05	0.89	Agree
Offer help for the one who needed it and take on volunteer opportunities.	4.13	0.90	Agree
Learn new skills and apply it in the work setting.	4.39	0.82	Strongly Agree
Be flexible and provide needed supports and resources.	3.99	0.91	Agree
Prioritize doing task and practice time management.	4.09	0.89	Agree
Weighted Mean	4.13		
SD	0.88		
Verbal Interpretation	High		

Table 7 shows the extent of students work behavior in terms of responsibility. Also shows the statements, mean, standard deviation and remarks.

The statement “Learn new skills and apply it in the work setting” obtained a high mean (M = 4.39 and SD=0.82) indicates a high extent of students’ persistence to learn new things and apply them in the classroom, be flexible and ensures that expectations are clear for the tasks assigned. On the other hand, the statement “Be flexible and provide needed supports and resources” gained a slightly lower mean (M = 3.99 and SD=0.91), indicating that learners still need to demonstrate

flexibility by providing supports and resources when needed. While the mean is slightly lower it still indicates a high extent of students work behavior in terms of responsibility by the learners.

The extent of students work behavior in terms of work habits attained a weighted mean score of 4.13 and a standard deviation of 0.88 and was verbally interpreted as *high* among the respondents. Learning new skills and applying them in a work setting helps students develop a sense of responsibility.

Table 8 Extent of Students' Work Behavior in Terms of Teamwork

STATEMENTS	MEAN	SD	REMARKS
Collaborate with every person involve and show the importance of teamwork.	4.33	0.80	Strongly Agree
Share enthusiasm and positivity with every people around.	4.08	0.96	Agree
Build diverse and inclusive teams and establish trust among them.	3.88	0.92	Agree
Encourage clear, frequent and effective communication.	4.04	0.94	Agree
Allow everyone to have autonomy in decision making.	4.15	0.90	Agree
Weighted Mean		4.09	
SD		0.91	
Verbal Interpretation		High	

Table 8 shows the extent of students work behavior in terms of teamwork. Also shows the statements, mean, standard deviation and remarks.

The statement “Collaborate with every person involve and show the importance of teamwork” obtained highest mean (M = 4.33 and SD=0.80) indicates a high extent of students’ collaboration with other members of the group. They also understand the importance of teamwork in achieving the goal in every assigned tasks. On the other hand, the statement “Build diverse and inclusive teams and establish trust among them” gained a slightly lower mean (M = 3.88 and SD=0.92) indicates

that learners still need to promote diversity and inclusivity among the group to build trust and have better and effective communication. While the mean is slightly lower, it still indicates a high extent of students work behavior in terms of teamwork by the learners.

Students' teamwork behavior was rated as high by the respondents, with a weighted mean score of 4.09 and a standard deviation of 0.91. This indicates that students demonstrate a high level of teamwork in their work behavior, as they actively strive to foster cooperation among their classmates.



Table 9 Extent of Students' Work Behavior in Terms of Commitment

STATEMENTS	MEAN	SD	REMARKS
Commit with any kind of work and task assigned.	4.19	0.87	Agree
Participate in various assessment programs to improve own's capabilities.	4.01	0.97	Agree
Allow self to take every chance to learn as part of a positive challenge.	4.20	0.88	Agree
Finish every work that are being started.	4.25	0.88	Strongly Agree
Inculcate a positive and productive work environment.	4.10	0.88	Agree
Weighted Mean	4.15		
SD	0.90		
Verbal Interpretation	High		

Table 9 shows the extent of students work behavior in terms of commitment. Also shows the statements, mean, standard deviation and remarks.

The statement “Finish every work that are being started” obtained the highest mean (M=4.25 and SD=0.88) indicates a high extent of students' commitment to finish every work assigned to them. They also understand necessity to grasp all the opportunity to learn new things from the tasks assigned to them. On the other hand, the statement “Participate in various assessment programs to improve own's capabilities” received a slightly lower mean of (M = 4.01 and SD=0.97), this indicates that the students still need to understand the importance of self-

assessment to better contribute for the success of their group. While the mean is slightly lower it still indicates a high extent of students work behavior in terms of commitment by the learners.

The extent of students work behavior in terms of commitment attained a weighted mean score of 4.15 and a standard deviation of 0.90 and was verbally interpreted as *high* among the respondents. This further means that consistently completing their work helps students develop a strong work ethic and reliability, qualities highly valued in academic and professional settings.

Table 10 Extent of Students' Work Behavior in Terms of Initiative

STATEMENTS	MEAN	SD	REMARKS
Build self-confidence and develop persistence.	4.09	1.03	Agree
Spot opportunities and potential improvements.	4.09	0.88	Agree
Help everyone in their work enable for the task to become more successful.	4.26	0.81	Strongly Agree
Analyze and communicate risks in common situations and initiate actions for solution.	4.01	0.91	Agree
Identify improvement opportunities and anticipate workplace issues.	4.08	0.97	Agree
Weighted Mean	4.10		
SD	0.92		
Verbal Interpretation	High		

Table 10 shows the extent of students work behavior in terms of initiative. Also shows the statements, mean, standard deviation and remarks.

The statement “Help everyone in their work enable for the task to become more successful” received the highest mean (M=4.26 and SD=0.81) implies a high extent of students' initiative to share knowledge and skills to finish every work assigned to them more successful. On the other hand, the statement “Analyze and communicate risks in common situations and initiate actions for solution” obtained a slightly lower mean (M = 4.01 and SD=0.91). This implies that learners still need to analyze and communicate risks in any situation and give potential solution to the problem presented. While the

mean is, slightly lower it still indicates a high extent of students work behavior in terms of initiative by the learners.

The extent of students work behavior in terms of initiative attained a weighted mean score of 4.10 and a standard deviation of 0.92 and was verbally interpreted as *high* among the respondents. Extending assistance with classroom activities not only helps accomplish tasks successfully but also showcases students' initiative and proactive attitude towards learnings.

Level of Students' Performance

The level of students' performance in terms of practical test was treated statistically using the mean and standard deviation.



Table 11 Level of Students' Performance in Terms of Practical Test

Criteria	Mean	SD	VI
Use of tools and equipment	3.63	0.55	Excellent
Application of procedures	3.48	0.64	Very Satisfactory
Safety work habits	3.49	0.58	Very Satisfactory
Completeness of tasks	3.39	0.57	Very Satisfactory
Time management	3.31	0.50	Very Satisfactory
Weighted Mean	3.46		
SD	0.57		
Verbal Interpretation	high		

Table 11 shows the level of students' performance in practical test. Also shows the Criteria, Mean, SD, and VI.

The table shows students' performance levels in a practical test assessed using a standard rubric from the Technology and Livelihood Education Learning Module. The criteria "Use of tools and equipment" obtained the highest mean (M = 3.63 and SD = 0.55) indicates that students demonstrate high level of proficiency in utilizing TLE tools and equipment. The criteria "Application of procedures" obtained (M=3.48 and SD = 0.64) indicates that students are knowledgeable in terms of applying what they have learned. The "Safety work habits" received (M=3.49 and SD = 0.58) indicating that students are prioritizing safety in workplace. The criteria "Completeness of task" received (M=3.39 and SD = 0.57) indicates that students performed and submit output on time. On the other hand, criteria on "Time management" received slightly lower mean (M = 3.31 and SD = 0.50) indicating students to develop effective time management skills and improve their ability to meet deadlines. While the mean is slightly lower, it still indicates a high extent of students work behavior in terms of initiative by the learners.

The level of students' performance in practical test is high showed in the weighted mean (M = 3.46 and SD = 0.57) with the verbal interpretation of "high". This further means that students are already familiar with the use and functions of specific tools and equipment according to Technology and Livelihood Education specialization, enhancing their learning experience. This familiarity helps them develop practical skills and competencies, leading to higher quality workmanship and greater confidence in their abilities.

Test of Relationship between Students' Learning Competencies and Work Behavior

To test the relationship between students' learning competencies and work behavior in work habits, responsibility, teamwork, commitment and initiative was treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

Table 12 shows the Significant Relationship between Students' Learning Competencies and Work Behavior

Table 12 Test of Relationship Between Students' Learning Competencies and Work Behavior

Students' Learning Competencies (IV)	Work Behavior (DV)				
	Work Habits	Responsibility	Teamwork	Commitment	Initiative
Cognitive :					
Pearson Correlation	0.62**	0.65**	0.54**	0.65**	0.63**
Significance(2-Tailed)	<.001	<.001	<.001	<.001	<.001
N	200	200	200	200	200
Technical:					
Pearson Correlation	0.63**	0.63**	0.58**	0.61**	0.60**
Significance(2-Tailed)	<.001	<.001	<.001	<.001	<.001
N	200	200	200	200	200
Work:					
Pearson Correlation	0.72**	0.71**	0.67**	0.74**	0.70**
Significance(2-Tailed)	<.001	<.001	<.001	<.001	<.001
N	200	200	200	200	200
Entrepreneurial:					
Pearson Correlation	0.70**	0.64**	0.58**	0.61**	0.66**
Significance(2-Tailed)	<.001	<.001	<.001	<.001	<.001
N	200	200	200	200	200
Inter-Personal:					
Pearson Correlation	0.61**	0.70**	0.73**	0.67**	0.64**
Significance(2-Tailed)	<.001	<.001	<.001	<.001	<.001
N	200	200	200	200	200

*Correlation is significant at the 0.05 level (2-tailed).



Correlations were computed among five students' learning competencies on data for 200 students. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

The correlation coefficients range from 0.54 to 0.73, indicating a moderate to strong positive relationship between the students' learning competencies and work behavior. As students' learning competencies increase, there is a corresponding improvement

in their work behavior. This indicates a strong relationship between students' learning competencies and work habits, responsibility, teamwork, commitment, and initiative.

Test of Significant Effect of Students' Learning Competencies to Students' Performance

To test the significant effect of students' learning competencies on students' performance in terms of practical test was treated statistically using Minitab v.16 using the regression analysis.

Table 13 Significant Effect of Students' Learning Competencies to Students' Performance in Terms of Practical Test

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	11.957	1.199		9.969	<.001
Cognitive Skills	0.994	0.423	0.260	2.348	.020
Technical Skills	0.447	0.409	0.124	1.098	.276
Work Skills	-0.098	0.447	-0.027	-0.219	.827
Entrepreneurial Skills	-0.675	0.380	-0.191	-1.775	.078
Interpersonal Skills	0.662	0.367	0.173	1.802	.073

R = .351; R² = .123; Adj. R² = 0.100 F(5, 194) = 2.09; p<.001

The table showed the unstandardized coefficients, standardized coefficients, t-values, and p-values for each predictor variable. The analysis included five predictor variables: cognitive skills, technical skills, work skills, entrepreneurial skills and interpersonal skills.

The results further showed that 1.23% of the variance is explained by the three predictors, $F(5, 32) = 0.610, p.611$. Specially, cognitive skills ($B=.26, t=2.35, p.020$) is positively affect with students' performance in terms of practical test. On the other hand, technical skills ($B=.12, t=1.10, p.276$), work skills ($B=-.03, t=0.22, p.827$), entrepreneurial skills ($B=-.19, t=1.78, p.078$) and interpersonal skills ($B=.17, t=1.80, p.073$) are not significantly affected the outcome variable.

Learning competencies in terms of cognitive skills has significant effect on students' students' performance in practical test. This implies that students possess a strong cognitive skill such as critical thinking, problem-solving, decision-making, and information manipulation.

4. CONCLUSION AND RECOMMENDATIONS

Based on the preceding findings, the following conclusion was drawn.

1. There is a significant relationship between learning competencies and the work behavior of students. This further implies that positive work behavior is essential to students' competencies as it enables them to apply their academic knowledge effectively, fosters a conducive learning environment, and prepares them for success in the workforce. By nurturing positive work behavior alongside academic learning, teachers can help students develop into well-rounded individuals equipped with the skills, attitudes, and attributes necessary for lifelong success. Thus, the null hypothesis is rejected.
2. There is a significant effect on students' learning competencies in terms of cognitive skills in practical test performance. However, no significant effect is seen in

technical, work, entrepreneurial, and interpersonal skills. This implies that these skills may not directly align with standardized assessments of learning competencies in practical tests. As a result, the null hypothesis is accepted.

In view of the findings and conclusions of the study, the following recommendations are given.

1. The School Administrator may encourage the teacher to craft a performance rubric that objectively and accurately measures students' learning competencies in technical, work, entrepreneurial, and interpersonal skills supporting meaningful assessment and facilitating growth and development.
2. It is recommended that educational institutions implement comprehensive training programs to upskill TLE teachers and better prepare students with the necessary learning competencies.
3. TLE teachers may provide project-based activities and emphasize personalized learning approaches to create conducive learning environments to cultivate desired work behaviors among students.

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INTERACTIVE LEARNING AIDS ON CRITICAL THINKING SKILLS AND MOTIVATION OF STUDENTS IN SOCIAL SCIENCE EDUCATION

Normin Odinia Arejola

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study would like to determine the relationship of interactive learning aids to the critical thinking skills and motivation of students in social science education. Specifically, it sought to identify the level of interactive learning aids in social science education in terms of multimedia presentation, educational games, print based aids and real-life objects, level of students critical thinking skills in social science education in terms of; creativity, curiosity, inference, decision making, level of students motivation in terms of; intrinsic and extrinsic and the relationship between interactive learning aids to students' critical thinking skills and motivation of students.

It involved one hundred sixty-five students from Laguna University, using a descriptive method. The findings reveal that the level of utilizing interactive learning aids in social science education in terms of multimedia presentation, educational games, print based aids and real-life objects was very high, same with the level of students critical thinking skills in terms ; creativity, curiosity, inference, decision making alongside with the level of students motivation in terms of intrinsic and extrinsic which means the teacher from Laguna University utilized these kind of interactive learning aids that helps to enhance the students critical thinking skills and motivation in social science education.

The study confirmed a significant relationship between interactive learning aids to the critical thinking skills and motivation of students. The correlations means that each type of interactive learning aid is positively associated with students' critical thinking skills and motivation across various dimensions. The statistically significant relationships imply that incorporating these interactive aids into the learning environment can potentially enhance students' critical thinking abilities and motivation. The teacher may use this study to serve as a basis in teaching and learning process in social science education in which they may improve their learning materials for teaching since there's a lot of digital platforms that can be used for teaching. Also, through this study they will determine which learning aids might be connected to the learning style to be able to effectively synergize the students during the discussion.

KEYWORDS: *interactive learning aids; critical thinking skills; motivation of students*

1. INTRODUCTION

An effective instructional method is essential to students' development. Children are more likely to become distracted at this age, so it may be challenging to get their attention focused on learning. This is the point at which various teaching aids enter the scene. It facilitates attentive learning and increases study focus in pupils. The many forms of instructional aids facilitate the improvement of students' comprehension and help to maximize their education.

Students might become bored with lengthy lectures and have more possibilities to get distracted. Nonetheless, using efficient methods of instruction will increase the kids' attention spans. Different teaching approaches are suited for different kinds of teaching tools. With proper teaching techniques, teachers can help their students grasp the vast majority of the topics found in their textbooks. Teaching aids help students learn in a variety of ways, to get their pupils to listen attentively in an engaging way when teachers employ a variety of teaching tools. Teaching aids are an essential piece of equipment in a classroom. Among many other benefits, using teaching aids can help students become more effective readers, differentiate instruction, explain or reinforce concepts, and lessen boredom or anxiety by presenting the subject in an entertaining way. Teaching aids

also engage students' senses in other ways because there is no limit to how they can be used to improve the instruction. Teachers have noticed a severe lack of reading comprehension proficiency in today's children. Teachers can close the achievement gap and raise their pupils' reading comprehension skills by utilizing instructional aids.

1.1 Statement of the Problem

Specifically, this study seeks to answer the following question:

1. What is the level of interactive learning aids in social science education in terms of:
 - 1.1 multimedia presentation;
 - 1.2 educational games;
 - 1.3 Print-based aids; and,
 - 1.4 Real-life objects?
2. What is the level of student's critical thinking skills in social science education in terms of:
 - 2.1 Creativity;
 - 2.2 Curiosity;
 - 2.3 Inference; and,
 - 2.4 Decision making?
3. What is the level of student's motivation in social science education in terms of:



- 3.1 Intrinsic; and,
- 3.2 Extrinsic?
- 4. Is there a significant relationship between interactive learning aids and students' critical thinking skills?
- 5. Is there a significant relationship between interactive learning aids and students' motivation?

2. METHODOLOGY

The research design in this study was quantitative in the relationship of interactive learning aids on students critical thinking skills and motivation in social science education.

One kind of research methodology that seeks to characterize a particular occurrence is descriptive study design. Descriptive research design is more than just collecting and analyzing data;

it also includes an aspect of interpreting the importance and meaning of the described. as stated by Hassan (2024)

3. RESULTS AND DISCUSSION

This chapter present, analyzes and interprets the data gathered that showed significant relationship between the level of utilizing interactive learning aid and students critical thinking skills also the relationship between the level of utilizing interactive learning aid and the student's motivation.

Level of Interactive Learning Aids

Level of utilizing interactive learning aid in social science include multimedia presentation, educational games, print based aid and real-life objects and was determine by mean and standard deviation.

Table 1 Level of Interactive Learning Aids in Social Science Education in Terms of Multimedia Presentation

Indicators	Mean	SD	Remarks
The teacher used different types of technological display like power point presentations, word documents and other online platform.	4.70	0.57	Strongly Agree
The teacher explains clearly the instructions in every activity.	4.61	0.63	Strongly Agree
Pictures are presented in every presentation.	4.46	0.70	Strongly Agree
The teacher uses video clips in every discussion.	4.33	0.88	Strongly Agree
The teacher uses audio-visual aids for the class presentation.	4.38	0.80	Strongly Agree

Overall Mean = 4.50

Standard Deviation = 0.74

Verbal Interpretation = Very High

Table 1 show the level of utilizing interactive learning aids in social science education in terms of media presentation. Teachers strongly agree that they utilized different types of technological displays like power point presentations, word documents, and other online platforms in teaching social science (M= 4.70) and they use of video clips in every discussion

(M= 4.33)

The overall mean score for all indicators combined is 4.50, with a standard deviation of 0.74 with a verbal interpretation of a "very high". These methods are well-received and contribute significantly to the educational experience in the social science classroom.

Table 2 Level of Interactive Learning Aids in Social Science Education in Terms of Educational Games

Indicators	Mean	SD	Remarks
The teacher provides educational games that are related to the lesson.	4.18	1.01	Agree
The teacher prepares some game-based activities in the lesson, to make the learning more fun.	4.28	0.96	Strongly Agree
The teacher uses interactive learning games that boost your confidence to participate in the class.	4.41	0.96	Strongly Agree
The teacher uses educational games that helps you to improve your memory and concentration to the topic.	4.41	0.90	Strongly Agree
Using game-based aids makes you learn new concept and skills.	4.55	0.71	Strongly Agree

Overall Mean = 4.36

Standard Deviation = 0.92

Verbal Interpretation = Very High

Table 2 show the level of utilizing interactive learning aids in social science education in terms of educational games. Students strongly agree that they their teacher use game-based aids that makes them learn new concept and skills in teaching social science (M=4.55) and they use educational games that is related to the lesson (M= 4.18)

The overall mean score for all indicators combined is 4.36, with a standard deviation of 0.92 with a verbal interpretation of a very high. These methods are well-received and contribute significantly to the educational experience in the social science classroom.



Table 3 Level of Interactive Learning Aids in Social Science Education in Terms of 1.3 Print based aids

Indicators	Mean	SD	Remarks
The printed-out materials help you to understand the lesson.	4.55	0.68	Strongly Agree
The teacher provides hand-outs that can motivate the students to stay focused on the task at hand.	4.45	0.81	Strongly Agree
The printed-out materials help you to interact with your teacher and your classmates.	4.41	0.79	Strongly Agree
The printed-out materials improve your memory and concentration to the topic.	4.60	0.70	Strongly Agree
The printed-out materials help to understand the concepts and makes learning actual.	4.56	0.73	Strongly Agree

Overall Mean = 4.51
 Standard Deviation = 0.75
 Verbal Interpretation = Very High

Table 3 show the level of utilizing interactive learning aids in social science education in terms of print-based aids. Students strongly agree that their teacher use printed-out materials help

to understand the concepts and makes learning actual in teaching social science (M=4.56) and printed-out materials helps the students interact to teacher and classmates (M= 4.41)

Table 4 Level of Interactive Learning Aids in Social Science Education in Terms of Real-life Objects

Indicators	Mean	SD	Remarks
Seeing the real objects related to the lesson helps you to interact with your teacher.	4.56	0.67	Strongly Agree
Doing the activity in actual process makes the learning more engaging.	4.59	0.63	Strongly Agree
Actual objects build student interest.	4.65	0.59	Strongly Agree
Actual materials enhance visual and retention skills.	4.61	0.61	Strongly Agree
Solid objects expand the scope of what can be learned.	4.59	0.66	Strongly Agree

Overall Mean = 4.60
 Standard Deviation = 0.63
 Verbal Interpretation = Very High

Table 4 show the level of utilizing interactive learning aids in social science education in terms of real-life objects. Students strongly agree that whenever they see actual objects, it builds their interest in teaching social science (M=4.65) and seeing the real objects related to the lesson helps you to interact with your teacher. (M= 4.56) The overall mean score for all indicators combined is 4.60, with a standard deviation of 0.63 with a verbal interpretation of a very high. These methods are well-

received and contribute significantly to the educational experience in the social science classroom.

Level of Students Critical Thinking Skills

Level of students critical thinking skills include creativity, curiosity, inference and decision making and was determine by mean and standard deviation.

Table 5 Level of Students Critical Thinking Skills in Social Science Education in Terms of Creativity

Indicators	Mean	SD	Remarks
The multimedia presentations help to build the creativity of the students.	4.68	0.62	Strongly Agree
Students create a meaningful and engaging arts media from multimedia presentations.	4.68	0.61	Strongly Agree
Learning activities allow students to explore their creativity in relevant, interesting and worthwhile ways.	4.65	0.62	Strongly Agree
Encourages the student to share their ideas and thoughts about the topic.	4.69	0.64	Strongly Agree
Using interactive learning aids makes you more productive and motivated.	4.62	0.67	Strongly Agree

Overall Mean = 4.67
 Standard Deviation = 0.63
 Verbal Interpretation = Very High

Table 5 reveal the level of students critical thinking skill in terms of creativity. Students strongly agree that they encourage to share their ideas and thought about the topic (M= 4.69). They also feel productive and motivated when teachers utilized interactive learning aid (M=4.62)

The overall mean score for all indicators combined is 4.67, with a standard deviation of 0.63, indicating a very high level of students' critical thinking skills in social science education through creativity. These means that utilizing multimedia



presentations and interactive learning aids effectively stimulate students' creativity and contribute significantly to their critical

thinking abilities in the social science subject.

Table 6 Level of Students Critical Thinking Skills in Social Science Education in Terms of Curiosity

Indicators	Mean	SD	Remarks
Learning aids makes you more excited if there are pictures and videos in the lesson.	4.66	0.62	Strongly Agree
Learning aids helps you to focus on the lesson to learn new concept from these learning materials.	4.55	0.68	Strongly Agree
Learning aids gives interesting ideas that leads to more engaging environment inside the classroom.	4.53	0.69	Strongly Agree
Cooperation helps you to survive in a changing learning environment in a way that there are new concepts and ideas provided by the teacher.	4.59	0.64	Strongly Agree
Eagerness makes you more interested in the topic and be involved in the process or in the activity	4.64	0.64	Strongly Agree

Overall Mean = 4.60
 Standard Deviation = 0.66
 Verbal Interpretation = Very High

Table 6 reveal the level of students critical thinking skill in terms of curiosity. Students strongly agree that Learning aids makes you more excited if there are pictures and videos in the lesson (M= 4.66). Learning aids gives interesting ideas that leads to more engaging environment inside the classroom. (M=4.53) The overall mean score for all indicators combined is 4.60, with a standard deviation of 0.66, indicating a very high

level of students' critical thinking skills in social science education through curiosity. These means that utilizing multimedia presentations and interactive learning aids effectively stimulate students' curiosity and contribute significantly to their critical thinking abilities in the social science subject.

Table 7 Level of Students Critical Thinking Skills in Social Science Education in Terms of Inference

Indicators	Mean	SD	Remarks
The teacher provides focus question about the topic or about the picture before starting the discussion by inserting them in their power point presentations.	4.62	0.67	Strongly Agree
The students are interested if there are new platform and concepts that was used by the teacher.	4.62	0.66	Strongly Agree
Learning aids provide the easy way to understand complex concepts, by showing pictures or diagrams.	4.61	0.67	Strongly Agree
The teacher uses multimedia presentations by showing video clips to make the learning more interesting to the students.	4.63	0.65	Strongly Agree
Learning aids help to deepen the student's comprehension of verbal, written and social information.	4.63	0.61	Strongly Agree

Overall Mean = 4.62
 Standard Deviation = 0.65
 Verbal Interpretation = Very High

Table 7 reveal the level of students critical thinking skill in terms of inference. Students strongly agree that the teacher uses multimedia presentations by showing video clips to make the learning more interesting to the students and it helps to deepen the student's comprehension of verbal, written and social information. (M= 4.63). Learning aids provide the easy way to understand complex concepts, by showing pictures or diagrams. (M=4.61)

The overall mean score for all indicators combined is 4.62, with a standard deviation of 0.65, indicating a very high level of students' critical thinking skills in social science education through curiosity. These means that utilizing multimedia presentations and interactive learning aids effectively stimulate students' inference and contribute significantly to their critical thinking abilities in the social science subject.

Table 8 reveal the level of students critical thinking skill in terms of decision making. Students strongly agree that helps the learners to think critically about a text and engage with it academically results in (M= 4.70). While watching videos that is related to the topic or in your life experiences gives an impact to your decisions in life resulted to (M=4.61)

The overall mean score for all indicators combined is 4.65, with a standard deviation of 0.58, indicating a very high level of students' critical thinking skills in social science education through decision making. These means that utilizing multimedia presentations and interactive learning aids effectively stimulate students' decision making and contribute significantly to their critical thinking abilities in the social science subject.



Table 8 Level of Students Critical Thinking Skills in Social Science Education in Terms of Decision Making

Indicators	Mean	SD	Remarks
By using the different interactive learning aids helps you to decide in a particular situation after understanding the lesson.	4.64	0.62	Strongly Agree
Watching videos that is related to the topic or in your life experiences gives an impact to your decisions in life.	4.64	0.55	Strongly Agree
The students were able to apply the lesson learned in school in their everyday life.	4.65	0.59	Strongly Agree
Used the necessary information from your lesson in school in decision making process.	4.64	0.57	Strongly Agree
Helps the learners to think critically about a text and engage wit it academically.	4.70	0.58	Strongly Agree

Overall Mean = 4.65

Standard Deviation = 0.58

Verbal Interpretation = Very High

Students must acquire abilities in critical thinking, open-mindedness, good judgement, reason, problem solving, and solution identification in order to display responsible decision making. They must think about other people in addition to themselves when making decisions. Being aware of how your decisions impact other people as well as yourself is crucial.

Level of Students Student’s Motivation

Level of students’ motivation in social science include intrinsic and extrinsic motivation and was determined by mean and

standard deviation.

Table 9 outlines the level of students' motivation in social science education, in terms of intrinsic motivation. Students strongly agree that they increase their engagement inside the classroom, feel motivated to involve themselves in the learning process (M= 4.64,). On the other hand, internal forces of motivation enhance the creativity and innovation of the student (M=4.56) The overall mean score of 4.60, with a standard deviation of 0.66, indicating a very high level of intrinsic motivation among students in social science education.

Table 9 Level of Student’s Motivation in Social Science Education in Terms of Intrinsic

Indicators	Mean	SD	Remarks
The students to increased their engagement inside the classroom who are motivated and would like their selves in the learning process.	4.64	0.67	Strongly Agree
The students have an inner standard of academic achievement and execute better performances on tasks.	4.58	0.69	Strongly Agree
The students are more persistent in the face of challenges and setbacks.	4.59	0.67	Strongly Agree
The inside forces of motivation have been shown to enhance creativity and innovation of the student.	4.56	0.65	Strongly Agree
The students who are willing to do things tend to experience greater psychological well-being with their learning.	4.63	0.62	Strongly Agree

Overall Mean = 4.60

Standard Deviation = 0.66

Verbal Interpretation = Very High

These means that fostering intrinsic motivation is essential for promoting student engagement, academic achievement, persistence, creativity, and psychological well-being in the social science classroom. Also, when a student is motivated by

internal reasons, they undertake a task because it is enjoyable or engaging. They are motivated by intrinsic enjoyment, which pushes them to complete a task regardless of the potential repercussions.

Table 10 Level of Student’s Motivation in Social Science Education in Terms of Extrinsic.

Indicators	Mean	SD	Remarks
The outside forces of motivation influence the students and their productivity level by providing a target or goal.	4.68	0.60	Strongly Agree
The students receive monetary rewards, promotions, trophies and psychological satisfaction once they complete the task.	4.54	0.76	Strongly Agree
The students survive in challenging situations from the activity because it is their desire to chase after goals or dreams.	4.63	0.69	Strongly Agree
External motivation for the students can be tangible and intangible as according to their preferences and needs.	4.67	0.60	Strongly Agree
The students complete the task because they will a receive a reward or prize from the teacher.	4.56	0.81	Strongly Agree

Overall Mean = 4.62

Standard Deviation = 0.70

Verbal Interpretation = Very High



Table 10 outlines the level of students' motivation in social science education, in terms of extrinsic motivation. Students strongly agree that the outside forces of motivation influence the students and their productivity level by providing a target or goal (M= 4.63,).

On the other hand, the students receive monetary rewards, promotions, trophies and psychological satisfaction once they complete the task. (M=4.56)
 The overall mean score of 4.62, with a standard deviation of

0.70, indicating a very high level of extrinsic motivation among students in social science education. These means that fostering extrinsic motivation is essential for promoting student engagement, academic achievement, persistence, creativity, and psychological well-being in the social science classroom. Extrinsic motivation is the desire to perform an action in order to obtain benefits or stay out of trouble. Put another way, we are driven by an activity's instrumental value; it serves as a means to an aim. There are individuals who are inherently more driven by external incentives.

Table 11 Significant Relationship between Interactive Learning Aids and Students' Critical Thinking Skills

Interactive Learning aids		Critical Thinking Skills			
		Creativity	Curiosity	Inference	Decision Making
Multimedia Presentation	Pearson Correlation	.530**	.539**	.514**	.495**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	165	165	165	165
Educational Games	Pearson Correlation	.488**	.482**	.540**	.464**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	165	165	165	165
Print based aids	Pearson Correlation	.502**	.520**	.514**	.522**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	165	165	165	165
Real-life objects	Pearson Correlation	.589**	.495**	.550**	.420**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	165	165	165	165

Note: ** $p < .05$ is significant

Table 11 shows the significant relationship between the level of utilizing the interactive learning aids such as multimedia presentation, educational games, print based aids real-life objects and the students critical thinking skill in terms of creativity, curiosity, inference and decision making. Pearson Correlation coefficients range from .420 to .589 indicating moderate to strong positive correlations. The ($p=0.000 < 0.05$) level of significance.

The correlations means that each type of interactive learning aid is positively associated with students' critical thinking skills across various dimensions. The statistically significant

relationships imply that incorporating these interactive aids into the learning environment can potentially enhance students' critical thinking abilities.

Table 12 shows the significant relationship between the level of utilizing the interactive learning aids such as multimedia presentation, educational games, print based aids real-life objects and the student's motivation in terms of intrinsic and extrinsic. Pearson Correlation coefficients range from .425 to .503 indicating moderate to strong positive correlations. The ($p=0.000 < 0.05$) level of significance.

Table 12 Significant Relationship between Interactive Learning Aids and Students' Motivation

Interactive Learning aids		Motivation	
		Intrinsic	Extrinsic
Multimedia Presentation	Pearson Correlation	.435**	.430**
	Sig. (2-tailed)	0.000	0.000
	N	165	165
Educational Games	Pearson Correlation	.425**	.483**
	Sig. (2-tailed)	0.000	0.000
	N	165	165
Print based aids	Pearson Correlation	.491**	.485**
	Sig. (2-tailed)	0.000	0.000
	N	165	165
Real-life objects	Pearson Correlation	.503**	.471**
	Sig. (2-tailed)	0.000	0.000
	N	165	165

Note: ** $p < .05$. is significant



The correlations means that each type of interactive learning aid is positively associated with students' motivation in doing his or her assigned tasked. The statistically significant relationships imply that incorporating these interactive aids into the learning environment can potentially enhance students' motivation. Furthermore, interactive learning aids have been demonstrated to improve learning results by increasing student engagement, a critical component. In order to learn well at the university level, students must be engaged in class discussions, group projects, and technology learning.

4. CONCLUSION AND RECOMMENDATIONS

In relation with the above-mentioned findings, the following conclusions were drawn:

Based on the data gathered the result finding shows the relationship between the level of utilizing the interactive learning aids such as multimedia presentation, educational games, print based aids real-life objects and the students critical thinking skill in terms of creativity, curiosity, inference and decision making indicates a moderate to strong positive correlations. The relationship between the level of utilizing the interactive learning aids such as multimedia presentation, educational games, print based aids real-life objects and the student's motivation in terms of intrinsic and extrinsic also indicates a moderate to strong positive correlations. It means that each type of interactive learning aid is positively associated with students' critical thinking skills and motivation across various dimensions. The relationship implies that incorporating these interactive learning aids into the learning environment can potentially enhance students' critical thinking abilities and motivation.

Therefore, the interactive learning aids has relationship to the students critical thinking skills and motivation in social science education.

The following were recommended based on the findings of the study:

1. The teachers may keep on using the interactive learning aids in teaching social science as what resulted in the study, but they may improve their learning materials for teaching since there's a of lot online platforms that can be used for teaching.
2. University officials and college heads may frequently conduct seminars and training to improve the skills of the teachers in using digitized learning materials in teaching since we have so many students who are well versed in digital platforms.
3. Teachers may refer to this study to determine which interactive learning aids might be connected to their learning style to be able to effectively synergize with their classmates and teachers during class discussion.

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THE ROLE OF TECHNOLOGY EDUCATION IN STUDENTS' SKILLS DEVELOPMENT AND PERSONAL GROWTH

Odette Umandal Mapanoo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study determined the role of technology education in the skills development and personal growth of grade 9 students and the significant relationship between the role of technology education on skills development and the personal growth of grade 9 students. The correlational research method is utilized in this study. It was conducted with selected Grade 9 students of Majada In Integrated School during the school year 2023-2024. The research instrument used was a researcher-made survey questionnaire.

Analysis revealed that the status of technology education in terms of application of knowledge, innovation, digital literacy, and adaptability was High. Likewise, the status of skills development in terms of goal setting, problem-solving, critical thinking, and teamwork was High. Personal growth in terms of decision-making, emotional intelligence, self-management, and resilience was high. The roles of technology education significantly affected the skills development and personal growth of grade 9 students; therefore, both null hypotheses were rejected. Therefore, technology education should be enhanced by providing a state-of-the-art classroom and implementing a technology-based curriculum. Technology and Livelihood Education competencies related to goal setting, problem-solving, critical thinking, and collaboration should be emphasized.

KEYWORDS: *technology education; skills development; personal growth*

1. INTRODUCTION

Nowadays, technology has embarked on its way in the development of the education system that we have here in the Philippines. This provides an opportunity for the students to be equipped with learning that can be used in everyday life.

DepEd Order 21, s. 2019 states that the K to 12 Program seeks to “provide the Filipino learners with the necessary skills and competence to prepare them to take on the challenges of the 21st century.” As a result, implementing the K to 12 Program is expected to “make the basic education system in the Philippines at par with international standards by ensuring that it is appropriate, responsive and relevant to the learners.” The DepEd Order stipulates the need for the learners to be competent and prepared to take on the challenges of the 21st century.

UNESCO Institute for Statistics, in DO 21 s 2019 Basic Education Monitoring and Conceptual Framework, mentioned that “Student learning outcome is the totality of information, knowledge, understanding, attitudes, value skills, competencies or behaviors an individual is expected to master upon successful completion of an educational program.” This stresses the expectancy of results from the students after the completion of the program through various standardized tests and assessments. The result will then be the indicator of whether the educational system is effective.

D'Angelo, Chloe (2018) mentioned in her study entitled “The Impacts of Technology Integration.” The social capital of educational institutions, interpersonal connections within society, and global communication are significantly impacted by information, communications, and technology (ICT) literacy. Technology in the classroom can support more

adaptable and democratic teaching and learning methods, provide students with greater autonomy and control over their education, and promote the growth of cognitive abilities and comprehension (Buckingham, 2013). Digital technology integration in the classroom can result in significant gains in student engagement and learning, ensuring that pupils are prepared for the demands of a technologically advanced society. Instructors are essential to making sure that students are using technology successfully.

This implies the great value of using technology in performing various tasks with higher efficiency and effectiveness. The mandatory incorporation of technology in maximizing and developing the potential within everyone is waiting to be realized. In a classroom setting, technology will be utilized to get and sustain students' interest in learning as this generation is inclined to use various gadgets and technological matters. An interested and enthusiastic student focuses his or her attention on the analytical solving of problems, which will engage him or her in a meaningful learning process leaning towards mastery of the learning competencies. Students engage in manipulatives and hands-on learning through technology-based learning activities, which develops their critical thinking skills and helps them take tangible results to the world, as John Dewey's Experiential Learning implies.

Moreover, technology-based instruction will help the teacher prepare the students for a meaningful learning process. The teacher will become more resourceful and analytical in incorporating technology-based activities and tasks aligned with the mastery of learning competencies. This will provide more energy and motivation for the teacher to take part in developing students' skills and personal growth.



It is promising to know the role of technology in the development of students' skills and how it affects their personal growth to make education fun and meaningful. From this perspective, the researcher wanted to explore further the role of technology education in students' skills development and personal growth.

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the status of Technology Education for the grade 9 students in terms of:
 - 1.1 application of knowledge
 - 1.2 innovation
 - 1.3 digital literacy, and
 - 1.4 adaptability?
2. What is the status of skills development of grade 9 students in terms of:
 - 2.1 goal setting
 - 2.2 problem solving
 - 2.3 critical thinking and
 - 2.4 teamwork?
3. What is the status of personal growth of the grade 9 students in terms of:
 - 3.1 decision making
 - 3.2 emotional Intelligence
 - 3.3 self-management; and
 - 3.4 resilience?
4. Is there a significant relationship between the role of technology education and skill development of grade 9 students?
5. Is there a significant relationship between the role of technology education and personal growth of grade 9 students?

2. METHODOLOGY

The correlational research method was utilized in this study. According to Griga (2017), correlational research aims to quantify the strength of a link between two or more variables. Relationships between and among various facts are considered in this form of design. Through this method, the researcher gathered data on the participants' responses to the survey, assessing the extent to which technology education affects the development of skills and the growth of individuals.

The major objective was to identify the significant relationship between the role of technology education and skill development as well as the personal growth of the students; it focuses on the role of technology education, such as the application of knowledge and skills, innovation, digital literacy and adaptability.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis, and interpretation of the data. To simplify the discussions, the researcher provided tables that summarized the collective reactions of the respondents.

Status of Role of Technology Education

The status of role of technology education in terms of application of knowledge, innovation, digital literacy and adaptability, was treated statistically using mean and standard deviation.

Status of Technology Education in Terms of Application of Knowledge

Table 1 shows the status of role of technology education in terms of the application of knowledge. It also shows the statements, mean, standard deviation and remarks.

The result shows that the students agreed to use principles to plan and carry out effective activities (M = 2.96 and SD = 0.72). Likewise, they also agreed to apply theoretical knowledge to explain occurrences in the real world with the (M = 2.96 and SD = 0.77). On the other hand, fewer of the students demonstrate proficiency in various laboratory works although it has a (M = 2.75 and SD = 0.74), it still indicates a high role of technology education in terms of the application of knowledge.

The status of role of technology education in terms of the application of knowledge attained a weighted mean of 2.96 and standard deviation of 0.76, verbally interpreted as *high* among the respondents. It can be inferred that the students have a positive response to the improvements and changes in the curriculum and resource availability. This also implied that technology education is needed in the application of knowledge to facilitate learning effectively.

Table 1 Status of Technology Education in Terms of Application of Knowledge

STATEMENTS	MEAN	SD	REMARKS
1. Use principles to plan and carry out effective activities.	2.96	0.72	Agree
2. Demonstrate proficiency in various laboratory works.	2.70	0.80	Agree
3. Apply theoretical knowledge to explain occurrences in the real world.	2.96	0.77	Agree
4. Share knowledge and extend technical assistance related to TLE.	2.94	0.78	Agree
5. Find substitute if the materials are not available.	2.75	0.74	Agree
Weighted Mean	2.96		
SD	0.76		
Verbal Interpretation	<i>High</i>		



Status of Role of Technology Education in Terms of Innovation

Table 2 describes the status of technology education in terms of innovation. It shows that the students agreed that the overall learning environment has improved, giving more dynamic and interesting education in the technology field gained the (M = 3.13 and SD = 0.77). Likewise, some of the students personally experienced the integration of 3D printing and virtual reality in their TLE lesson as gained (M = 2.60 and SD = 0.89).

The weighted Mean of 2.88 and Standard Deviation of 0.83 indicates the high level of technology education's role in innovation. This means that the role of technology education in innovation is important in students' learning that can be applied to real-life situations, skill improvement, and engagement with technology-related educational practices, implying that teachers adapt innovative strategies in delivering the lessons.

Table 2 Status of Role of Technology Education in Terms of Innovation

STATEMENTS	MEAN	SD	REMARKS
1. The courses offer real-world-relevant knowledge and abilities that are applicable in real situations.	3.04	0.69	Agree
2. The overall learning environment has improved, giving me a more dynamic and interesting education in the field of technology.	3.13	0.77	Agree
3. Personally experienced the integration of 3D printing and virtual reality has been used in teaching-learning process of TLE lesson.	2.60	0.89	Agree
4. Actively stay informed about the newest developments and tools in technology education to ensure that my skills and knowledge aligns with the evolving landscape of the field.	2.85	0.88	Agree
5. Convinced that my involvement in technology education contributes significantly address global challenges particularly those related to climate and sustainability	2.80	0.92	Agree
Weighted Mean	2.88		
SD	0.83		
Verbal Interpretation	High		

Table 3 Status of Role of Technology Education in Terms of Digital Literacy

STATEMENTS	MEAN	SD	REMARKS
1. Use a computer, laptop, smartphone, or tablet in my studies.	3.23	0.94	Agree
2. Use the internet to accomplish my assignments and other schoolwork.	2.97	0.97	Agree
3. Confident and knowledgeable in using email and sending attachments.	2.80	0.92	Agree
4. Aware of netiquette (correct or acceptable ways of communicating on the internet principles).	3.00	0.88	Agree
5. Perform basic troubleshooting on any digital device.	2.67	0.92	Agree
Weighted Mean	2.93		
SD	0.93		
Verbal Interpretation	High		

Table 3 presents the role played by technology education in digital literacy.

The results show that the respondents agreed that they could use a computer, laptop, smartphone, or tablet to study and do their tasks with the highest (M = 3.23 and SD = 0.94). On the other hand, fewer students can perform basic troubleshooting on

digital devices. It has a (M = 2.67 and SD = 0.92).

Overall, the weighted mean calculated is 2.93 with a standard deviation of 0.93. The data gathered has High verbal interpretation. This proves that completing assignments and other coursework was greatly aided by the use of digital literacy



in technology education. Most pupils understand the significance of digital literacy.

With the given findings, students have basic knowledge in using gadgets because the generation today are highly dependent on technology. Thus, simple knowledge in using technology could help students keep up with ever changing world. Unfortunately, some students have little or no knowledge about troubleshooting of digital devices. Thus, troubleshooting can be emphasized more in teaching technology education.

Status of Role of Technology Education in Terms of Adaptability

Table 4 presents the role played by technology education in adaptability.

It can be denoted from the result that the students agreed and recognized that the lessons in TLE are the response to the needs and demands of industries nearby with the highest (M = 3.06 and SD = 0.74). On the other hand, the students are gradually taking action when remote learning takes place in the event of unforeseen disruptions, although it has the (M = 2.52 and SD = 0.74). Overall, the weighted mean calculated is 2.83 with a standard deviation of 0.78. The data gathered has High verbal interpretation.

Table 4 Status of Role of Technology Education in Terms of Adaptability

STATEMENTS	MEAN	SD	REMARKS
1. Adapt at the emerging technological trends and advancements in timely manner.	2.99	0.70	Agree
2. Know that technology lessons are responsive to the needs and demands of students and industries it serves.	3.06	0.74	Agree
3. Stay up to date with emerging technologies.	2.73	0.86	Agree
4. Ensure that the use of technology remains adaptable to new technological trends.	2.83	0.87	Agree
5. Allow immediate transition to remote learning in the event of unforeseen disruptions.	2.52	0.74	Agree
Weighted Mean	2.83		
SD	0.78		
Verbal Interpretation	High		

Furthermore, as indicated in the data, the students are aware of the latest technology and need to be swift-handed to meet the demands of the industry. In the event of unforeseen disruptions students are slightly slow in transitioning to remote learning. This implies that every student should be adaptable and equipped on online learning platforms. Adaptability, a component of technology education, contributes to technological trends and advancements in response to the needs

of students. Universities tend to adapt and stay updated with the emerging technological trends in society and modernize existing programs, facilities and infrastructure.

Status of Skills Development

Students' skills development status in terms of goal setting, problem-solving, critical thinking and teamwork was treated statistically using mean and standard deviation.

Table 5 Status of Skills Development in Terms of Goal Setting

STATEMENTS	MEAN	SD	REMARKS
1. Set specific, measurable, attainable, result-oriented and time-bound (SMART) goals to chart a clear path towards improvement.	3.01	0.74	Agree
2. Uphold in the essence of adjusting to the current trends and technologies in TLE.	2.86	0.78	Agree
3. Prioritize setting goals that challenge me to acquire new skills and deepen existing knowledge in TLE.	2.98	0.79	Agree
4. Regularly assess my progress towards goals to adjust as needed to stay on track.	3.01	0.78	Agree
5. Firmly believe in the power of lifelong learning.	3.28	0.84	Strongly Agree
Weighted Mean	3.03		
SD	0.78		
Verbal Interpretation	High		



Table 5 presents the status of skills development in terms of goal setting. It shows that the students strongly agree on the power of lifelong learning with the (M = 3.28 and SD = 0.84). On the other hand, the students agreed that they could slightly uphold the essence of adjusting the current trends and technologies in TLE with the (M = 2.86 and SD = 0.78).

In general, the weighted mean calculated is 3.03 with the standard deviation of 0.78. The data gathered has High verbal interpretation. This means that skills development through goal setting can support students in choosing the correct path, acquiring new skills, and becoming lifelong learners. This implies that lessons in TLE should be practical, result oriented and in accordance with the current trends and technologies.

Table 6 Status of Skills Development in Terms of Problem Solving

STATEMENTS	MEAN	SD	REMARKS
1. Excel in creatively navigating through obstacles using my ability to think outside of conventional boundaries to find innovative solutions.	2.83	0.76	Agree
2. Accept challenges with a systematic and analytical mindset, allowing me to identify and address issues at their root.	2.82	0.79	Agree
3. Successfully tackled complex problems by leveraging combination of analytical thinking, collaboration, and adaptability.	2.89	0.82	Agree
4. Expert at making informed decisions under pressure and have a keen eye for identifying opportunities for improvement.	2.85	0.83	Agree
5. Always strive to ensure that the solutions I proposed is aligned with ethical standards and principles.	2.81	0.84	Agree
Weighted Mean	<i>2.84</i>		
SD	<i>0.81</i>		
Verbal Interpretation	<i>High</i>		

Table 6 presents the status of skills development in terms of problem solving. From the data gathered from the answers of the respondents, they can successfully tackle complex problems by leveraging the combination of analytical thinking, collaboration, and adaptability got the highest (M = 2.89 and SD = 0.82). On the other hand, the students make an extra effort to propose solutions aligned with ethical standards and principles (M = 2.81 and SD = 0.84).

interpretation.

In the findings, students can successfully overcome and provide solutions to the problem encountered using their analytical thinking, working harmoniously with others and being adaptable in the current situation. Also being reminded that the solutions are aligned with ethical standards and principles. This implies the development of skills requires problem-solving. The ability to tackle complex problems, propose solutions to problems encountered, and identify opportunities for improvement can be advantageous for students.

Overall, the weighted mean calculated is 2.84 with a standard deviation of 0.81. The data gathered has High verbal

Table 7 Status of Skills Development in Terms of Critical Thinking

STATEMENTS	MEAN	SD	REMARKS
1. Learned more about how to justify why certain procedures are undertaken in my subject.	3.03	0.75	Agree
2. Developed more focused and systematic way of thinking.	3.03	0.82	Agree
3. Learned more about how to approve complex issues in a variety of ways.	2.91	0.80	Agree
4. Improved my ability to judge the value of information or evidence presented to me.	3.05	0.81	Agree
5. Developed a more open-minded approach in analyzing, interpreting, and judging alternative points of view.	3.05	0.79	Agree
Weighted Mean	<i>3.01</i>		
SD	<i>0.80</i>		
Verbal Interpretation	<i>High</i>		



Table 7 presents the status of skills development in terms of critical thinking. From the data gathered from the answers of the respondents, the respondents agreed that they improved their ability to judge when there is a value of information or evidence presented to them got the (M = 3.05 and SD = 0.81), likewise that they can developed a more open-minded approach in analyzing, interpreting and judging alternative points of view with the (M = 3.05 and SD = 0.79). On the other hand, respondents who agreed that they can still learn more about how to approve complex issues in various ways got the lowest (M = 2.91 and SD = 0.80).

Overall, the weighted mean calculated is 3.01 with a standard deviation of 0.80. The data gathered has High verbal interpretation.

As a result, students actively used their critical thinking when they engaged in a particular situation and had a handful of information to process. Hence, critical thinking is a component of skills development that involves analyzing information, evaluating arguments, and making informed decisions based on logic and reasoning. This skill is essential for problem-solving, decision-making, and personal growth, as it helps individuals

to think more deeply, be more open-minded, and make better choices in various aspects of life.

Status of Skills Development in Terms of Teamwork

Table 8 reveals the status of skills development in terms of teamwork. The results show that the respondents strongly agreed that everyone is encouraged to share ideas, which got the highest (M = 3.43 and SD = 0.85). They agreed that each team member should contribute equally to the groups’ task, which got the lowest (M = 2.91 and SD = 1.0).

In general, the weighted mean calculated is 3.23 with the standard deviation of 0.83. The data gathered has Very High verbal interpretation.

As per the realization of the students, everyone has a positive characteristic of being a team player. Valuing each other’s opinions and sharing ideas are very important in a team. Teamwork contributes to decision-making. This implies that teamwork can aid individuals in appreciating diverse perspectives, sharing knowledge, and leveraging each other’s strengths to achieve greater success.

Table 8 Status of Skills Development in Terms of Teamwork

STATEMENTS	MEAN	SD	REMARKS
1. Actively contribute to discussions and decision-making within the team.	3.30	0.78	Strongly Agree
2. I valued others’ opinion in the team.	3.42	0.76	Strongly Agree
3. Encourage everyone to share ideas.	3.43	0.85	Strongly Agree
4. Find team projects enhance my understanding of the subject matter.	3.11	0.78	Agree
5. Feel that each team member contributes equally to groups’ task.	2.91	1.00	Agree
Weighted Mean	3.23		
SD	0.83		
Verbal Interpretation	Very High		

Status of Personal Growth

The status of the grade 9 students’ personal growth in decision making, emotional intelligence, self-management, and resilience was treated statistically using mean and standard deviation.

Status of Status of Personal Growth in Terms of Decision Making

Table 9 reveals the status of personal growth in terms of decision making. From the data gathered from the respondents’ answers, they strongly agreed to understand and respect other people’s views with a (M = 3.57 and SD = 0.73). On the other hand, respondents found that to a certain extent, they find it easy

to think clearly when deciding in a hurry, getting the lowest (M = 2.88 and SD = 0.90).

The weighted mean calculated is 3.18 with a standard deviation of 0.78. The data gathered has High verbal interpretation.

As indicated in the data, students tend to make their decisions with respect and consideration of well-being and interest of other people, since the students are considerate, they find difficulties when they are needed to decide in a hurry. Decision-making is a crucial part of personal growth for students, as it assists them in developing essential life skills and preparing for future challenges.



Table 9 Status of Status of Personal Growth in Terms of Decision-Making

STATEMENTS	MEAN	SD	REMARKS
1. Allow examination of the whole situation before drawing conclusions.	3.05	0.71	Agree
2. Participate in work activities with commitment and dedication.	3.32	0.75	Strongly Agree
3. Understand and respect other people's views.	3.57	0.73	Strongly Agree
4. Work out all the pros and cons before making the decision.	3.10	0.81	Agree
5. Find it easy to think clearly when I have to decide something in a hurry.	2.88	0.90	Agree
Weighted Mean	<i>3.18</i>		
SD	<i>0.78</i>		
Verbal Interpretation	<i>High</i>		

Table 10 Status of Personal Growth in Terms of Emotional Intelligence

STATEMENTS	MEAN	SD	REMARKS
1. Highly motivated individual.	2.89	0.89	Agree
2. View problem situations as "challenges" not as an obstacle.	3.17	0.88	Agree
3. Forced to select between options, I stop and reflect before acting.	2.93	0.89	Agree
4. Accept strengths and weaknesses as part of who I am.	3.45	0.82	Strongly Agree
5. Aware of, understand and appreciate the feelings of others.	3.48	0.85	Strongly Agree
Weighted Mean	<i>3.18</i>		
SD	<i>0.87</i>		
Verbal Interpretation	<i>High</i>		

Table 12 reveals the status of personal growth in terms of emotional intelligence. From the data gathered from the respondents' answers, they strongly agreed that they are aware of, understand and appreciate the feelings of others the highest (M = 3.48 and SD = 0.85). Even though being a highly motivated individual got the lowest (M = 2.89 and SD = 0.89).

In general, the weighted mean calculated is 3.18 with the standard deviation of 0.87. The data gathered has High verbal

interpretation.

The result showed that the students take into consideration the feelings of others and accept strengths and weaknesses. Thus, preventing conflicts and miscommunication in the learning environment. Emotional intelligence should involve self-reflection, active listening, seeking feedback from others, and participating in activities that promote empathy and social awareness.

Table 11 Status of Personal Growth in Terms of Self-management

STATEMENTS	MEAN	SD	REMARKS
1. Maintain focus and manage time to meet deadlines.	3.33	0.79	Strongly Agree
2. Handle pressure and stress specifically hand-on activity	3.03	0.85	Agree
3. Effective in adapting my plans and strategies when faced with unexpected changes or challenges.	3.06	0.74	Agree
4. Proactive in seeking additional resources or guidance to enhance my understanding TLE lessons.	3.03	0.74	Agree
5. Reflect on my own performance and adjust to improve my self-management skills.	3.23	0.83	Agree
Weighted Mean	<i>3.10</i>		
SD	<i>0.87</i>		
Verbal Interpretation	<i>High</i>		



Table 11 presents the status of personal growth in terms of self-management. From the data gathered from the answers of the respondents, they strongly agreed that they can maintain focus and manage time to meet deadlines with the highest (M = 3.33 and SD = 0.79). On the contrary, they can still handle pressure and stress on their hands-on activity with the (M = 3.03 and SD = 0.85) additionally they are proactive in seeking additional resources or guidance that enhance their understanding of TLE

lessons with the (M= 3.03 and SD = 0.74)
 The weighted mean calculated is 3.10 with a standard deviation of 0.79. The data gathered has High verbal interpretation.

Results from table presented students self-management is when students tend to cultivate focus, determination, and creates plans and strategies when faced with challenges and adversity to improve their performance and abilities.

Table 12 Status of Personal Growth in Terms of Resilience

STATEMENTS	MEAN	SD	REMARKS
1. Perceive setbacks or challenges as opportunities for personal growth.	3.16	0.72	Agree
2. Adjust to changes.	3.25	0.79	Strongly Agree
3. Take control of the situation.	2.93	0.83	Agree
4. Cope up with external pressure such as expectations from family or peers in my technology education life.	3.01	0.73	Agree
5. Approach new situations with an open mind.	3.13	0.84	Agree
Weighted Mean	<i>3.09</i>		
SD	<i>0.78</i>		
Verbal Interpretation	<i>High</i>		

Table 12 presents the status of personal growth in terms of resilience. From the data gathered from the answers of the respondents, they strongly agreed that they could certainly adjust to changes with the highest (M = 3.25 and SD = 0.79). On the other hand, they are slightly struggling to control the situation (M = 2.93 and SD = 0.83).

In general, the weighted mean calculated is 3.09 with a standard deviation of 0.78. The data gathered has High verbal interpretation.

Findings showed that students can easily adjust to change because they take challenges as opportunities to learn new strategies. External pressures affect how students take control of the situation. Resilience is an essential aspect of personal growth for students, enabling them to overcome challenges, adapt to changes, and bounce back from setbacks.

Test of Significant Relationship between the Role of Technology Education and Skill Development

To test the significant relationship between the role of technology education and skill development of students in terms of goal setting, problem solving, critical thinking and teamwork was treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

The correlation coefficients measure the strength and direction of the relationship between the role of technology education and skill development. A positive correlation indicates that as the role of technology education increases, skill development also tends to increase.

Correlations were computed among four roles of technology education on data for 159 students. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

Table 13 Significant Relationship between the Role of Technology Education and Skill Development Skills Development (DV)

Role of Technology Education (IV)	Goal Setting	Problem Solving	Critical Thinking	Teamwork
Application of knowledge:				
Pearson Correlation	0.65**	0.59**	0.43**	0.65**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159
Innovation:				
Pearson Correlation	0.61**	0.56**	0.44**	0.66**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159
Digital literacy:				
Pearson Correlation	0.55**	0.57**	0.42**	0.62**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159



Adaptability: Pearson Correlation	0.46**	0.37**	0.29**	0.43**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159

Pearson Correlation Significance(2-Tailed) is at 0.05

The correlation coefficients range from 0.29 to 0.66, indicating a weak to moderate positive relationship. The P-value is less than the alpha value of 0.05 level of significance. This implies that as technology education's role increases, students' skill development is greater. Technology education equips students with essential competencies necessary for academic success and future career readiness by applying knowledge, innovation, digital literacy, adaptability, goal setting, problem-solving, critical thinking, and teamwork. As technology continues to evolve, integrating technology education into the curriculum remains essential in preparing students to thrive in an increasingly digital and interconnected world.

Test of Significant Relationship between the Role of Technology Education and Personal Growth

To test the significant relationship between the role of technology education and students' personal growth in decision making, emotional intelligence, self-management and resilience were treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

The correlation coefficients measure the strength and direction of the relationship between the role of technology education and

personal growth. A positive correlation indicates that as role of technology education increases, personal growth also tends to increase.

Correlations were computed among four role of technology education on data for 159 students. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

The correlation coefficients range from 0.29 to 0.57, indicating a weak to moderate positive relationship. The P-value is less than the alpha value of 0.05 level of significance. This implies that as technology education's role increases, students' personal growth is greater. Technology education's significant role is in fostering personal growth among students. Technology education nurtures essential skills and qualities such as decision-making, emotional intelligence, self-management, and resilience through the application of knowledge, innovation, digital literacy, and adaptability. By providing students with practical opportunities to learn, explore, and innovate, technology education prepares them to navigate the complexities of the modern world and thrive in diverse personal and professional contexts.

Table 14 Significant Relationship between the Role of Technology Education and Personal Growth

Role of Technology Education (IV)	Personal Growth (DV)			
	Decision making	Emotional Intelligence	Self-management	Resilience
Application of knowledge:				
Pearson Correlation	0.48**	0.50**	0.39**	0.48**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159
Innovation:				
Pearson Correlation	0.56**	0.43**	0.41**	0.57**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159
Digital literacy:				
Pearson Correlation	0.51**	0.54**	0.29**	0.54**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159
Adaptability:				
Pearson Correlation	0.46**	0.56**	0.30**	0.50**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	159	159	159	159

Pearson Correlation Significance(2-Tailed) is at 0.05

As educators continue to integrate technology education into the curriculum, it is essential to recognize its transformative potential in shaping students' personal growth and development.

4. CONCLUSION AND RECOMMENDATIONS

The following were the conclusions drawn from the findings:

Technology education has significant relationship in students' skills development. Therefore, the null hypothesis was rejected.

Technology education is highly valued and motivates students to learn more effectively.

Technology education has a significant relationship with students' personal growth. Therefore, the null hypothesis was rejected. This means that proper management of technology related components in schooling will promote personal growth.

In light of the conclusion drawn from the study of the role of technology education in students' skill development and personal growth among grade 9 students of Majada In



Integrated School, the following recommendations have been provided:

1. Technology education should be enhanced by providing a state-of-the-art classroom.
2. Implementation of curriculum in all learning areas should be technology-based.
3. It is recommended that the curriculum's technology and livelihood education competencies be integrated with skills related to goal setting, problem-solving, critical thinking, and collaboration.

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PAGSUSURI, PAGHUBOG AT MOTIBASYON SA KAHUSAYAN SA PANONOOD NG PELIKULANG PANLIPUNAN

Roseann G. Sangalang

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pag-aaral na ito ay may kinalaman sa pagsusuri, paghubog at motibasyon sa kahusayan sa panonood ng pelikulang panlipunan. Ang mga datos ay nalikom dalawang daan at apatnapu't apat (244) na tagatugon upang masagot ang suliranin na nagsasaad na: (1) Ano ang kaugnayan ng pagsusuri batay sa: (a) tauhan; (b) teorya/dulog; at (c) nilalaman (2) Ano ang kaugnayan ng paghubog sa kahusayan sa panonood ayon sa: (a) pananaw; (b) damdamin at, (c) saloobin? (3) Ano ang kaugnayan ng motibasyon sa panonood batay sa: (a) interes at (b) kapaligiran. (4) Ano ang antas ng kahusayan sa panonood ng pelikulang panlipunan ng mga mag-aaral batay sa: (a) kognitibong pag-aanalisa. (5) May makabuluhang epekto ba ang pagsusuri, paghubog at motibasyon sa kahusayan sa panonood ng pelikulang panlipunan? (6) 6. May makabuluhang epekto ba ang pagsusuri, paghubog at motibasyon sa kognitibong pag-aanalisa ng pelikula?

Sa pag-aaral na ito ang mananaliksik ay gumamit ng deskriptibong pamamraan upang makakalap ng mga tiyak na kasagutan at mahahalagang impormasyon. Ginamit ang weighted mean, sa pagtanggap o pagtanggap ng negatibong hinuha ng pananaliksik.

Inilahad ang kinalabasan ng pag-aaral na ito na Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa kahusayan at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na "Walang makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa kahusayan sa panonood ng pelikulang panlipunan" ay tanggapin, ipinapakita nito na epekto sa pagitan nila.

Mula sa pag-aanalisa ng mga datos na nakalap, Batay sa mga kasagutan at konklusyon, ang mga sumusunod ang ibinigay na rekomendasyon: Batay sa mga resulta ng pananaliksik na ito, iminumungkahi ng mananaliksik sa mga kaguruan na mahikayat ang mga mag-aaral sa malalim na pagsusuri ng pelikulang panlipunan nang sa gayon ay mamulat ang mga mag-aaral sa mga aral na makukuha sa pinanood. Hinahangad ng mananaliksik na gabayan ng mga magulang ang kanilang mga anak sa pag-aaral. Suportahan sa mga gawain gaya ng mga gawain sa asignaturang sinesosyedad, sapagkat marami ang matutunan sa mga pelikulang sinusuri.

Sa mga susunod na mananaliksik, ang pananaliksik na ito ay maaaring gawing gabay sa pagsasagawa ng pananaliksik. Nawa'y patuloy na isakatuparan ang paggawa ng ganitong uri ng pananaliksik. Malawak ang pelikula at iba-iba ang genre, panatilihin ang pagtuklas at pagyamin ang pelikula at pagsuporta sa asignaturang sinesosyedad.

SUSING SALITA: pelikulang panlipunan; sinesosyedad; kahusayan sa panonood

1. PANIMULA

Iba-iba ang pagkatuto ng tao, maaaring sa pamamagitan ng pakikinig, pagsasalita, pagsusulat at pagbabasa, ngunit sa paglipas ng panahon ay maaari din tayong matuto sa tulong ng panonood. Batid natin na talamak ngayon ang social media kung saan ay marami tayong nakikita at napapanood. Sa kolehiyo ay mas pinakikinabangan ang panonood at ito ay kabilang sa asignatura sa Filipino na SINESOSYEDAD o Pelikulang Panlipunan. Dito makikita natin ang iba't ibang isyung panlipunan na ginawang pelikula, maaaring hango sa tunay na buhay o kathang isip lamang. Sa asignaturang ito ay hindi ka lamang manonood bagkus ay ginagamitan ito ng kritikal na pag-iisip o malalim na pagsusuri.

Habang umuunlad ang mundo ay patuloy ang pagbabago, maraming mga pagbabago ang nakikita natin sa bawat tao. Ang ilan ay sumusunod lamang sa uso o maging sa agos at daloy ng kanilang mga nakakasalamuha. Bawat isa sa atin ay may kanyang kanyang kwento, bawat isa ay nakararanas ng mga pagbaba at pag-angat sa buhay, ang ilan ay hindi na alam ang gagawin, hindi alam kung ano ang kahihitnan ng kanilang araw. At iba naman ay gusto ng putulin ang kanilang buhay, yung iba naman gusto pang mabuhay ngunit katawan na nila yung bumigay.

Baligtad talaga ang tao, parang yung mga pangyayari sa pelikula, lahat ng tauhan may pinagdaraan at ang ibang mga manonood ay nailalagay nila ang kanilang sarili sa katauhan ng bawat karakter sa palabas.

Sa iba ay may magandang naidudulot ang kanilang mga pinanood, siguro nakakukuha sila ng mga aral o mensahe na makatutulong sa kanila upang masolusyonan ang kanilang problema, minsan naman ang ibang palabas ay nagdudulot ng hindi maganda sa manonood lalo't higit ang mga pelikulang hindi angkop sa mga taong nasa murang edad, kung minsan ay dala na rin ng kuryosidad sa pinanood kung bakit ginagaya nila ito. Kung minsan naman, ang mga pelikulang ating pinanood ay nagbibigay kaalaman sa atin pagdating sa pag-aaral, dahil may mga palabas na patungkol sa kultura at kasaysayan, may ilan pang pinakikita ang buhay ng isang bayani at talaga namang maipagmamalaki natin ito. Ngunit may kahalagahan nga ba talaga ang panonood? Mayroon tayong Makrong kasanayan, kung saan ito ang mga paraan kung paano matuto ang isang tao, maaaring sa paraan ng pakikinig, pagbabasa, pagsusulat, pagsasalita at may ilang teorya rin na sinasabing maaari nating isama ang panonood sapagkat mas malaki ang impluwensya ng panonood sa pagkatuto ng isang



tao dahil mainam na nakikita at naririnig nila sa tuwing sila ay nanonood.

Sa panahon ngayon ay napakaraming paraan na ginagawa upang makapanood, ang ilan ay ginagawa itong libangan o pampalipas oras ngunit ang ilan naman ay sinusuri ang kanilang napanood at binibigyang kahulugan ang mga pangyayari o tagpo sa bawat senaryo upang sa gayon ay masuri nila sa malalim na paraan.

May ilang mga mag-aaral ang nahihirapan sa pagsusuri ng mga pelikula sapagkat ang ilan ay hindi gaanong seryoso sa panonood at ang ilan naman ay hindi lubos na nauunawaan ang mga napapanood nilang pelikula kaya ang Pagsusuri, Paghubog at Motibasyon sa Kahusayan sa Panonood ng Pelikulang Panlipunan.

1.1 Paglalahad ng Suliranin

1. Ano ang antas ng pagsusuri sa panonood batay sa:
 - 1.1 tauhan;
 - 1.2 teorya/dulog; at
 - 1.3 nilalaman?
2. Ano ang antas ng paghubog sa kahusayan sa panonood batay sa:
 - 2.1 pananaw;
 - 2.2 damdamin; at
 - 2.3 saloobin?
3. Ano ang antas motibasyon sa panonood batay sa:
 - 3.1 interes; at
 - 3.2 kapaligiran?
4. . Ano ang antas ng kahusayan sa panonood ng pelikulang panlipunan ng mga mag-aaral batay sa:
 - 4.1 kognitibong pag-aanalisa?
5. May makabuluhang epekto ba ang pagsusuri, paghubog at motibasyon sa kasanayan sa panonood ng pelikulang panlipunan?
6. Ano ang maaring mabuong programa sa pag-aaral na ito?

2. METODOLOHIYA NG PANANALIKSIK

Ang pamamaraan na ginamit sa pananaliksik na ito ay sa pamamagitan ng deskriptibong pamamaraan o paglalarawan. Ang paglalarawan ay isang mabisang paraan upang malaman ang Pagsusuri, Paghubog at Motibasyon sa Kahusayan sa Panonood ng Pelikulang Panlipunan.

Talahanayan 1. Antas ng Kasanayan sa Pagsusuri Batay sa Tauhan

Mga Pahayag	Mean	SD	Puna
1. Ang pagsusuri ng tauhan ay may malaking impak sa manonood.	4.48	0.56	Lubos na sumasang-ayon
2. Ang mga dayalogo na binibitawan ng tauhan ay nagbibigay aral sa manonood.	4.69	0.46	Lubos na sumasang-ayon
3. Nakikita ng mga manonood ang kanilang sarili sa ilang tauhan ng pelikula.	4.55	0.55	Lubos na sumasang-ayon
4. Pinakikita ng karakterisasyon ng tauhan ang antas ng lipunan.	4.51	0.55	Lubos na sumasang-ayon
5. Bukod sa mga pangunahing tauhan ay nabibigyang halaga rin ang ilang tauhan sa tuwing nagsusuri ng pelikula.	4.58	0.52	Lubos na sumasang-ayon

Overall Mean: 4.56

Standard Deviation: 0.22

Literal na paliwanag: Lubhang Mataas

Layunin din ng pag-aaral na ito na lumalim ang kaalaman ng mga mag-aaral sa pagsusuri ng pelikulang panlipunan at maging gabay ang mga balangkas upang mapadali at maisaayos ang pagsusuri. Ang pamamaraan ding ito ay nagpapakita ng detalyadong kongklusyon sa haypotesis sa paraang pagsusuri ng mga imporasyon o datos na nakalap ng mananaliksik.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Sa kabanatang ito pinakikita ang mga presentasyon, analisis resulta at interpretasyon ng datos buhat sa sagot ng mga tagatugon. Ang mga katanungang makikita sa Kabanata 1 sa paglalahad ng suliranin ay sinusupportahan ng grapikong representasyon o talahanayan. Ang istadistika ay inilapat base sa talatanungang ibinigay na may kaugnayan sa pananaliksik patungkol sa pagsusuri, paghubog at motibasyon sa kahusayan sa panonood ng pelikulang panlipunan ng mga mag-aaral.

Ang mga datos na nakalahad ay nakaayos batay sa pagkakasunod-sunod sa paglalahad ng suliranin.

Sa kabanatang ito rin makikita ang pag-aanalisa sa bawat datos na nakuha, ang mga datos ay nagmula sa mga mag-aaral sa kolehiyo na nasa ikatlong baiting kung saan sila ay may asignaturang sinesosyedad na kung saan ay magsisilbing batayan upang makuha ang matamang pagsusuri ng pelikulang panlipunan.

Antas ng Kasanayan sa Pagsusuri sa Kahusayan sa Panonood

Sa pag-aaral na ito, nakapaloob ang antas ng kasanayan sa pagsusuri batay sa tauhan, teorya/dulog at nilalaman. Kung saan ang naiisa-isa ang bawat detalye ng pinanood na pelikulang panlipunan.

Ang mga pahayag sa talahanayang ito, makikita ang Raw Score, Frequency, Percentage at Mapaglarawang Katumbas.

Sa talahanayan 1, nakapaloob ang antas ng kasanayan sa pagsusuri batay sa tauhan, kung saan naiisa-isa ng mga manunuri ang kanilang kaalaman patungkol sa bawat tauhan at nabibigyan ng positibo at negatibong pagpapakahulugan sa bawat tauhan ng pelikulang pinanood.



Sa *lubhang mataas* na antas ng kaugnayan ng pagsusuri at sa pananaw ng mga tagatugon, *ang mga dayalogo na binibitawan ng tauhan ay nagbibigay aral sa manonood* ay nakakuha ng ($M=4.69, SD=0.46$) at *bukod sa mga pangunahing tauhan ay nabibigyang halaga rin ang ilang tauhan sa tuwing nagsusuri ng pelikula* ay mayroong ($M=4.58, SD=0.52$). Bagaman napansin na *lubhang mataas* na antas ng paggamit ng audio-grapiya, ang pahayag na may pinakamababang marka ay *ang pagsusuri ng tauhan ay may malaking impak sa manonood* at mayroong ($M = 4.48, SD = 0.56$).

May kabuoang mean na 4.56, standard deviation na 0.22 at ipinapakita na ang antas ng kaugnayan ng pagsusuri batay sa tauhan ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*.

Palinawag pa ni Larigo (2015) ang tauhan sa kwento ay ang mga karakter o tao na gumaganap ng mga papel sa narrative. Sila ang nagdadala at nagbibigay-buhay sa kuwento. May mga pangunahing tauhan, na karaniwang may malaking papel sa plot, at mayroon ding mga karakter sa paligid na nagbibigay-kulay at konteksto sa kwento.

Sa pagsusuri ng pelikula, ang tauhan ay may kanya-kayang kahulugan batay sa kanyang ginagampanan kung saan susuriin itong mabuti sa kung ano ang kalagayan nito. Marami sa mga Pilipino ang magaling at talentado sa pagbibigay ng kahulugan at interpretasyon sa bawat kilos/galaw at maging sa sinasabi ng tauhan sa kwento.

Ilan sa mga kwento o pelikulang sinuri ay taliwas ang sinasabi ng manunuri sa pinakakahulugan ng kwento na mula sa awtor o manunulat nito, ngunit sabi nga, kapag ito ay inilabas mo na sa masa, ibig sabihin ay may mga tao ng maaaring magbigay ng interpretasyon sa ginawa mong kwento ng pelikula, at bilang manunulat kailangang maging handa at bukas sa anumang ibibigay na suhestiyon at mungkahi ng mga manunuri sa kwentong kanyang ginawa. Dahil ditto mahalaga ang pag-aaral at pagsusuri ng pelikula sapagkat lumalalim pa an gating pang-unawa sa iba't ibang larangan ng pelikula.

Sa talahanayan 2, makikita ang antas ng kasanayan sa pagsusuri batay sa teorya/dulog, kung saan ipinakikita at naiisa-isa ang mga teoryang may kinalaman sa bawat senaryo ng pelikula.

Talahanayan 2. Antas ng kaugnayan ng pagsusuri batay sa teorya/dulog

Mga Pahayag	Mean	SD	Puna
1. <i>Nakikita ang pinupunto ng pelikula sa tulong ng teorya.</i>	4.57	0.54	Lubos na sumasang-ayon
2. <i>Naiisa-isa ang teorya sa bawat senaryo ng pelikula.</i>	4.60	0.53	Lubos na sumasang-ayon
3. <i>Naiiugnay ang teorya sa sitwasyong panlipunan.</i>	4.58	0.50	Lubos na sumasang-ayon
4. <i>Ang apat na pangunahing dulog sa pagsusuri ay tugma sa anumang pelikula.</i>	4.58	0.53	Lubos na sumasang-ayon
5. <i>Maayos ang daloy ng pagsusuri sa tulong ng teorya.</i>	4.56	0.54	Lubos na sumasang-ayon

Overall Mean: 4.58

Standard Deviation: 0.24

Literal na paliwanag: Lubhang Mataas

Sa Talahanayan bilang 2, para sa antas ng pagsusuri sa teorya o dulog, *lubhang mataas* ang antas ng naiisa-isa ang teorya sa bawat senaryo ng pelikula at ito ay nakakuha ng ($M=4.60, SD=0.53$). Ang pag-uugnay ng teorya sa sitwasyong panlipunan ay may ($M=4.58, SD=0.50$) ay nakakuha ng lubos na sumasang-ayon, samantala an gang apat na pangunahing dulog sa pagsusuri ay tugma sa anumang pelikula ay may ($M=4.58, SD=0.53$) na may puna ring lubos na sumasang-ayon. Ang nakikita ang pinupunto ng pelikula sa tulong ng teorya ay may ($M=4.57, SD=0.54$) Samantala ang maayos na daloy ng pagsusuri sa tulong ng teorya ay may ($M=4.56, SD=0.54$) na lubos na sumasang-ayon.

May kabuoang mean na 4.58, standard deviation na 0.24 at ipinakikita na ang antas ng kaugnayan ng pagsusuri batay sa teorya o dulog ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*.

Lubos na nakatutulong ang mga dulog upang masuring mabuti ang mga pangyayari at senaryo sa pelikula. Sa tulong ng mga

dulog malalaman kung ano ang tema ng kanilang pelikulang sinuri.

Maraming dulog ang maaaring gamitin sa isang pelikula, maaaring marxismo o markismo kung saan ito ay patungkol sa pagitan ng mayaman at mahirap, kung ang pelikula ay may kinalaman sa ganitong uri ay maaari nating gamitin ang marxismo, sumunod ang teoryang realismo, kung saan hango sa salitang real na ang ibig sabihin ay totoo, kung ang pinanood na pelikula ay may kinalaman sa totoong buhay ay maaaring gamitin ang teoryang realismo, sumunod ay ang teoryang pormalismo kung saan makikita ang kagandahan at kaayusan ng pelikula, halimbawa, ang pagkakaroon ng flashback. Gayundin ang kabuuang kaayusan sa sa musika at ilaw. Ang huli ay ang teoryang feminismo, ito ang teoryang may kaugnayan sa karapatan, kalakasan ng kababaihan, kung saan dito itinataas ang mga kakayahan o kayang gawin.

Sa talahanayan 3, nakapaloob ang antas ng kasanayan sa pagsusuri batay sa nilalaman ng pelikulang sinuri.



Talahanayan 3. Antas ng Kasanayan sa Pagsusuri Batay sa Nilalaman

Mga Pahayag	Mean	SD	Puna
1. Nasusuri nang maayos ang nilalaman ng pelikula batay sa pagkaunawa sa pinanood.	4.60	0.51	Lubos na sumasang-ayon
2. Ang tema ng pelikula ay nailapat nang maayos sa tulong ng kognitibong pag-aanalisa.	4.60	0.51	Lubos na sumasang-ayon
3. Nabibigyang halaga ang bawat detalye ng pelikula dahil sa pagsusuri nito.	4.58	0.53	Lubos na sumasang-ayon
4. Ang mga paggalaw at kagamitan ay nabigyan ng kahulugan.	4.60	0.52	Lubos na sumasang-ayon
5. Ang mga paksang nakapaloob sa pelikula ay nasasalamain sa totoong buhay.	4.55	0.55	Lubos na sumasang-ayon

Overall Mean: 4.59

Standard Deviation: 0.26

Literal na paliwanag: Lubhang Mataas

Sa talahanayan 3, para sa antas ng kaugnayan ng pagsusuri batay sa nilalaman makikita na ang nasusuri nang maayos ang nilalaman ng pelikula batay sa pagkaunawa sa pinanood at maging ang tema ng pelikula ay nailapat nang maayos sa tulong ng kognitibong pag-aanalisa ay may (M=4.60, SD=0.51) Samantala ang nagbibigyang halaga ang bawat detalye ng pelikula dahil sa pagsusuri nito ay may (M=4.58, SD=0.53) na may punang lubos na sumasang-ayon. Ang mga paggalaw at kagamitan ay nabigyan ng kahulugan at may (M=4.60, SD=0.52) Samantala, ang mga paksang nakapaloob sa pelikula ay nasasalamain sa totoong buhay ay may (M=4.55, SD=0.55) na may punang lubos na sumasang-ayon.

May kabuoang mean na 4.59 at standard deviation na 0.26 at ipinakikita na ang antas ng kaugnayan ng pagsusuri batay sa nilalaman ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa nilalaman natin makikita ang tema, paksa at kung saan patungkol ang pelikulang sinuri. Maging ang mga detalye at pangyayari sa pelikula ay nabibigyang-pansin.

Antas ng Kasanayan sa Paghubog sa Kahusayan sa Panonood

Sa pag-aaral na ito, nakapaloob ang antas ng kasanayan sa pagsusuri sa kahusayan sa panonood batay sa pananaw, damdamin at saloobin. Ang mga kahusayang ito ay may kinalaman sa pababahagi ng sarili sa anumang nakitang detalye sa pelikulang pinanood. Sa pagsusuring ito rin kinakilangan ng pagiging bukas ang isip sa bawat maririnig na pananaw, damdamin at saloobin ng iba.

Ang mga pahayag sa talahanayang ito, makikita ang Raw Score, Frequency, Percentage at Mapaglarawang Katumbas.

Sa talahanayan 4, ipinakikita ang antas ng kasanayan sa paghubog sa kahusayan sa panonood ng mga mag-aaral ayon sa pananaw, kung saan nabibigyang halaga ang kanilang opinyon sa pelikula.

Talahanayan 4. Antas ng Kasanayan sa Paghubog sa Panonood ayon sa Pananaw

Mga Pahayag	Mean	SD	Puna
1. Nahubog ang pagbibigay ng sariling pananaw sa tulong ng pagsusuri ng pelikula.	4.50	0.56	Lubos na sumasang-ayon
2. Ang pananaw sa panonood ay nabago dahil sa malalim na pagsusuri.	4.59	0.55	Lubos na sumasang-ayon
3. Hindi na ginagawang libangan ang panonood bagkus ito ay binibigyang-pansin.	4.53	0.55	Lubos na sumasang-ayon
4. Nagkaroon ng malalim na pananaw sa bawat temang kasangkot sa pelikula.	4.60	0.54	Lubos na sumasang-ayon
5. Nakabubuo nang malalim na pananaw dahil sa kahasaan sa pagsusuri.	4.53	0.57	Lubos na sumasang-ayon

Overall Mean: 4.55

Standard Deviation: 0.28

Literal na paliwanag: Lubhang Mataas

Pinakikita sa talahanayan 4, para sa antas ng kaugnayan ng paghubog sa kahusayan sa panonood ayon sa pananaw, na ang nahubog ang pagbibigay ng sariling pananaw sa tulong ng pagsusuri ng pelikula ay may (M=4.50, SD=0.56) na lubos na sumasang-ayon. Ang pananaw sa panonood ay nagbago dahil sa malalim na pagsusuri ay may (M=4.59, SD=0.55). Hindi na ginagawang libangan ang panonood bagkus ito ay binibigyang-pansin ay may (M=4.53, SD=0.55) na lubos na sumasang-ayon. Nagkaroon ng malalim na pananaw sa bawat temang

kasangkot sa pelikula na may (M=4.60, SD=0.54) Samantalang nakabubuo nang malalim na pananaw dahil sa kahasaan sa pagsusuri ay may (M=4.53, SD=0.57) na lubos na sumasang-ayon.

May kabuoang mean na 4.55, standard deviation na 0.28 at ipinakikita na ang antas ng kaugnayan ng pagsusuri batay sa pananaw ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.



Mahalaga ang pananaw sa bawat pagsusuri, sapagkat nabubuksan ang ating isip sa ibang mga bagay. Gayundin ay nagiging bukas tayo sa ideya ng mga kapwa natin nagsuri.

Ang pagbibigay ng pananaw sa pelikulang sinuri ay magkakaroon ng impak sa personalidad ng isang tao, sapagkat nagiging bukas ang kanyang isip sa anumang napansin niya sa

pelikulang kanyang sinuri at gayundin ay nagiging bukas din ang isipan nya sa ibang bagay na napansin ng ibang manunuri.

Ang Talahanayan 5, ipinakikita ang antas ng kasanayan sa paghubog sa kahusayan sa panonood ayon sa damdamin, kung saan nabibigyang pansin ang kanilang naramdaman sa pelikula.

Talahanayan 5. Antas ng Kasanayan sa Paghubog sa Kahusayan sa Panonood ayon sa Damdamin

Mga Pahayag	Mean	SD	Puna
1. Nagiging patas sa pagsusuri dahil binigyang damdamin ang pagsusuri ng pelikula.	4.58	0.53	Lubos na sumasang-ayon
2. Nakatutulong kontrolin ang damdamin sa ugaling mayroon ang tauhan sapagkat sinuri ang katauhan nito gamit ang malalim na pagkaunawa.	4.62	0.53	Lubos na sumasang-ayon
3. Naging bukas sa anumang desisyon ng tauhan sa pelikula.	4.60	0.54	Lubos na sumasang-ayon
4. Sumusuporta sa pagsusuri ng iba, sapagkat ito ang napansin sa pelikula.	4.54	0.57	Lubos na sumasang-ayon
5. Nabubuklod ang sarili at ibang tao dahil nagkaroon ng katulad na nadama sa pelikula.	4.54	0.56	Lubos na sumasang-ayon

Overall Mean: 4.58

Standard Deviation: 0.25

Literal na paliwanag: Lubhang Mataas

Sa talahanayan 5, sa paghubog sa kahusayan sa panonood ayon sa damdamin, para sa nagiging patas sa pagsusuri dahil binigyang damdamin ang pagsusuri ng pelikula ay may (M=4.58, SD=0.53), nakatutulong kontrolin ang damdamin sa ugaling mayroon ang tauhan sapagkat sinuri ang katauhan nito gamit ang malalim na pagkaunawa ay may (M=4.62, SD=0.53). Naging bukas sa anumang desisyon ng tauhan sa pelikula ay may punang lubos na sumasang-ayon at may (M=4.60, SD=0.54) Ang sumusuporta sa pagsusuri ng iba sapagkat ito ang napansin sa pelikula ay may (M=4.54, SD=0.57). Nabubuklod ang sarili at ibang tao dahil nagkaroon ng katulad na nadama sa pelikula, at ito ay may (M=4.54, SD=0.56)

May kabuoang mean na 4.58, standard deviation na 0.25 at ipinakikita na ang antas ng kaugnayan ng pagsusuri batay sa damdamin ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang damdamin ang ilan sa mga salik na may kaugnayan sa pagsusuri, sapagkat sa pamamagitan ng ating damdamin ay napahihiwatig natin ang ating naunawaan sa pelikulang ating napanood.

Bawat manonood ay may iba't ibang nararamdaman sa pelikulang kanyang pinanood, ang iba ay masaya, malungkot o ang iba naman ay kinilig pero minsan sa pagsusuri ay hindi lang puro positibo ang maaari nating sabihin, kung hindi pati na rin ang negatibong napansin natin sa pelikula, sapagkat makatutulong ito sa pag-unlad.

Sa Talahanayan 6, makikita ang antas ng kasanayan sa paghubog sa kahusayan sa panonood ayon sa saloobin ng mga mag-aaral na nagsuri ng pelikula.

Talahanayan 6. Antas ng Kasanayan sa Paghubog sa Kahusayan sa Panonood ayon sa Saloobin

Mga Pahayag	Mean	SD	Puna
1. Nagkakaroon ng boses na sabihin ang napansin at napuna sa pelikula.	4.59	0.51	Lubos na sumasang-ayon
2. Bukas sa anumang pagsusuri ng ibang manunuri.	4.60	0.60	Lubos na sumasang-ayon
Handang ibahagi ang kanyang napuna at maging batayan ang kanyang pagsusuri.	4.55	0.55	Lubos na sumasang-ayon
4. May kakayahang mahikayat ang iba sa tulong ng kanyang ibinahaging saloobin.	4.55	0.55	Lubos na sumasang-ayon
5. Malayang naipakikita pasulat man o pasalita ang kanyang saloobin sa pelikula.	4.53	0.53	Lubos na sumasang-ayon

Overall Mean: 4.56

Standard Deviation: 0.25

Literal na paliwanag: Lubhang Mataas

Para sa talahanayan 6, nagkakaroon ng boses na sabihin ang napansin at napuna sa pelikula ay may (M=4.59, SD=0.51) Ang bukas sa anumang pagsusuri ng ibang manunuri ay may

(M=4.60, SD=0.60). Ang handang magbahagi ng kanyang napuna at maging batayan ang kanyang pagsusuri at ang may kakayahang mahikayat ang iba sa tulong ng kanyang



ibinahaging saloobin ay may (M=4.55, SD=0.55). Samantala ang naipakikita pasulat man o pasalita ang kanyang saloobin sa pelikula ay may (M=4.53, SD=0.53) na may punang lubos na sumasang-ayon.

May kabuoang mean na 4.56, standard deviation na 0.25 at ipinakikita na ang antas ng kaugnayan ng pagsusuri batay sa saloobin ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang saloobin o ang ating naiisip at nararamdaman ay may malaking impak sa gagawing pagsusuri, sapagkat ang mga bagay na ating naunawaan ay ating naibabahagi sa iba't ibang paraan, pasulat man o pasalita. Ang saloobin din ang daan upang ang bawat tao ay maging bukas sa isa't isa at makapagbahagi ng ideya sa mga taong nakakasalamuha niya. Nabibigay daan din ang saloobin upang maunawaan at

maintindihan ang sinasabi ng bawat isa, sapagkat kung ang taong hindi nagbabahagi ng kanyang saloobin ay mananatiling takot sa sasabihin ng iba.

Antas ng Kasanayan sa Motibasyon sa Kahusayan sa Panonood

Sa pag-aaral na ito, nakapaloob ang antas ng kasanayan sa motibasyon sa kahusayan sa panonood batay sa interes at kapaligiran. Malaki ang impluwensya ng kapaligiran sa pagkatuto ng isang tao, tulad sa pagsusuri ang ilan ay nais sa tahimik na lugar ang ilan naman ay hindi.

Ang mga pahayag sa talahanayang ito, makikita ang Raw Score, Frequency, Percentage at Mapaglarawang Katumbas. Sa Talahanayan 7, makikita ang antas ng kasanayan sa panonood batay sa interes ng mga mag-aaral na nagsuri ng pelikula.

Talahanayan 7. Antas ng Kasanayan sa Panonood Batay sa Interes

Mga Pahayag	Mean	SD	Puna
1. Nababago ng pelikula ang interes ng bawat manonood.	4.60	0.51	Lubos na sumasang-ayon
2. Nanonood ang isang tao kung ang palabas ay batay sa kanyang interes.	4.57	0.52	Lubos na sumasang-ayon
3. Ang pagsusuri ng pelikula ay depende sa kagustuhan ng manonood.	4.61	0.54	Lubos na sumasang-ayon
4. Dumarami ang bilang ng tao na nagnanais manood ng pelikulang panlipunan.	4.61	0.52	Lubos na sumasang-ayon
5. Mas ninanais ng tao ang panood kaysa magbasa.	4.57	0.55	Lubos na sumasang-ayon

Overall Mean: 4.59

Standard Deviation: 0.24

Literal na paliwanag: Lubhang Mataas

Sa talahanayan 7, makikita sa antas ng kaugnayan ng panonood batas sa interes ang nababago ng pelikula ang interes ng bawat manonood, at ito ay may (M=4.60, SD=0.51), nanonood ang isang tao kung ang palabas ay batay sa kanyang interes na may (M=4.57, SD=0.52) na lubos na sumasang-ayon. Ang pagsusuri ng pelikula ay depende sa kagustuhan ng manonood ay may (M=4.61, SD=0.52). Dumarami ang bilang ng tao na nagnanais manood ng pelikulang panlipunan ay may (M=4.61, SD=0.52) At mas ninanais ng tao ang manood kaysa magbasa ay may (M=4.57, SD=0.55) na may punang lubos na sumasang-ayon.

interes ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Iba-iba ang paraan ng pagkatuto ng tao, ang ilan ay natututo kapag may kasama, ang ilan naman ay nais lang mag-isa, ngunit ano pa man ang paraan, ay nakabatay pa rin ito sa ating interes. Kaya sa talahanayang ito makikita kung paano mas natututo ang tao batay sa kanyang pagsusuri at interes sa bawat genre ng pelikulang susuriin.

Ang Talahanayan 8, makikita ang antas ng kasanayan sa panonood batay sa kapaligiran ng mga mag-aaral na nagsuri ng pelikula.

Talahanayan 8. Antas ng Kasanayan sa Panonood Batay sa Kapaligiran

Mga Pahayag	Mean	SD	Puna
1. Malaki ang impluwensya ng kapaligiran sa panonood.	4.58	0.51	Lubos na sumasang-ayon
2. Nakapanonood nang mabuti kung walang kasama.	4.63	0.54	Lubos na sumasang-ayon
3. Ang ingay ng kapaligiran ay nakaaapekto sa pagsusuri ng pelikula.	4.53	0.55	Lubos na sumasang-ayon
4. Ang panonood nang may kasama ay nakadaragdag ng ideya upang masuri ang pelikula.	4.56	0.54	Lubos na sumasang-ayon
5. Ang maayos na kapaligiran ay nagbibigay ng kapayapaan sa isip ng manonood.	4.61	0.53	Lubos na sumasang-ayon

Overall Mean: 4.58

Standard Deviation: 0.22

Literal na paliwanag: Lubhang Mataas



Para sa talahanayan 8, sa antas ng kaugnayan ng panonood batay sa kapaligiran, ang malaki ang impluwensya ng kapaligiran sa panonood ay may (M=4.58, SD=0.51). Ang mga mag-aaral na nakapanonood nang mabuti kung walang kasama ay may (M=4.63, SD=0.54) na lubos na sumasang-ayon. Ang ingay ng kapaligiran ay nakaaapekto sa pagsusuri ng pelikula na may (M=4.53, SD=0.55). Ang panonood nang may kasama ay nakadaragdag ng ideya upang masuri ang pelikula ay may (M=4.56, SD=0.54). Samantala, ang maayos na kapaligiran ay nagbibigay ng kapayapaan sa isip ng manonood ay may (M=4.61, SD=0.53) na may punang lubos na sumasang-ayon.

May kabuoang mean na 4.58, standard deviation na 0.22 at ipinapakita na ang antas ng kaugnayan ng pagsusuri batay sa kapaligiran ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa panonood ay marapat nating isaalang-alang ang kapaligiran, sapagkat Malaki ang epekto nito sa ating pagkatuto. Gaya na nalang ng maingay na kapaligiran, kung minsan ay mawawala ang pagtuon natin ng pansin sa panonood dahil sa ingay na ating naririnig.

Antas ng kahusayan sa panonood ng pelikulang panlipunan ng mga mag-aaral batay sa kognitibong pag-aanalisa

Sa pag-aaral na ito, nakapaloob ang antas ng kasanayan sa panonood ng pelikulang panlipunan ng mga mag-aaral batay sa kognitibong pag-aanalisa.

Ang mga pahayag sa talahanayang ito, makikita ang Raw Score, Frequency, Percentage at Mapaglarawang Katumbas.

Talahanayan 9. Antas ng Kahusayan sa Panonood ng Pelikulang Panlipunan ng mga Mag-aaral Batay sa Kognitibong Pag-aanalisa

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
43 – 50	227	93.03	Pinakamahusay
35 – 42	16	6.56	Higit na Mahusay
27 – 34	0	0.00	Mahusay
19 – 26	0	0.00	Katamtamang Mahusay
10 – 18	0	0.00	Di-lubhang Mahusay
0 – 9	1	0.41	Hindi Mahusay
Total	244	100	
Weighted Mean		46.62	
Pinakamababang Marka		4	
Pinakamataas na marka		50	Pinakamahusay
Standard Deviation		3.92	

Talahanayan bilang siyam ay nagpapakita ng antas ng kahusayan sa panonood ng pelikulang panlipunan ng mga mag-aaral, sa kabuoang dalawang daan at apatnaput-apat na tagatugon, ang marka na “43 - 50” ay nakakuha ng pinakamataas na bilang na dalawang daan at dalawamput-pito (227) o 93.03% ng kabuoang tumugon at may mapaglarawang katumbas na *Dalubhasa*. At ang marka na “35 - 42” ay mayroong bilang na labing-anim (16) o 6.56% ng kabuoang tumugon at may mapaglarawang katumbas na *Malapit at halos pumantay sa Dalubhasa*. Habang ang marka na “0 - 9” ay nakakuha ng pinakamababang bilang na isa (1) o 0.41% ng kabuoang tumugon at may mapaglarawang katumbas na *Hindi Dalubhasa*.

May kabuoang (*Weighted Mean = 46.62, SD = 3.92*) at (*pinakamababang marka = 4, pinakamataas na marka = 50*) ipinapakita na ang antas ng kahusayan sa panonood ng

pelikulang panlipunan ng mga mag-aaral batay sa kognitibong pag-aanalisa ay may mapaglarawang katumbas na *Dalubhasa* at may literal na paliwanag na *Napakakasiya-siya*.

Sa pagsusuri ay dapat gamitan ng malalim o kognitibong paraan ng pagsusuri, kung saan malalim at pinag-isipang mabuti ang mga pangyayaring naganap sa pelikula.

Makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa kasanayan sa panonood ng pelikulang panlipunan

Sa pag-aaral na ito, nakapaloob ang Makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa kahusayan sa panonood ng pelikulang panlipunan

Ang mga pahayag sa talahanayang ito, makikita ang Raw Score, Frequency, Percentage at Mapaglarawang Katumbas.

Talahanayan 10. Makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa kasanayan sa panonood ng pelikulang panlipunan

Kahusayan sa Pagsusuri	B	SE	B	t	P
<i>Constant</i>	41.25	6.696		6.161	3E-09
<i>Tauhan</i>		1.232	2.938	2.385	0.018
<i>teorya/dulog</i>		1.078	-0.083	-0.077	0.939
<i>Nilalaman</i>		1.075	-1.667	-1.551	0.122
<i>R-squared</i>				.026	
<i>Adjusted R-squared</i>				.014	



Standard Error of the Estimate		3.894		2.13		0.097	
F(3, 240)							
Kahusayan sa Paghubog	B	SE	B	t	p		
Constant	46.38	5.891		7.873	1E-13		
Pananaw		1.021	1.373	1.345	0.18		
Damdamin		1.067	0.889	0.833	0.406		
Saloobin		1.165	-2.208	-1.896	0.059		
R-squared				.018			
Adjusted R-squared				.006			
Standard Error of the Estimate		3.908		1.508		.213	
F(3, 240)							
Kahusayan sa Motibasyon	B	SE	β	t	p		
Constant	45.07	6.016		7.492	1E-12		
Interes		1.124	1.421	1.264	0.207		
Kapaligiran		1.207	-1.085	-0.899	0.37		
R-squared				.007			
Adjusted R-squared				.000			
Standard Error of the Estimate		3.922		.907		.405	
F(2, 241)							

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto ng pagsusuri, paghubog at motibasyon sa kahusayan sa panood ng pelikulang panlipunan. Ang *regression model* ay nagpapaliwanag ng 2.6%, 1.8% at 0.8% ng *variance* sa kahusayan ng mga mag-aaral (R-squared = 0.026, 0.018, 0.007). Ang *pagsusuri, paghubog at motibasyon* ay walang positibong epekto sa kahusayan sa panood ng pelikulang panlipunan. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan (F (3, 240) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na kahusayan ng mga mag-aaral.

Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa

kahusayan at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto ng pagsusuri, paghubog at motibasyon sa kahusayan sa panood ng pelikulang panlipunan” ay tanggapin, ipinapakita nito na epekto sa pagitan nila.

Ang panood ng pelikulang panlipunan ay may malaking epekto at impluwensya sa paraan ng pagkatuto ng mga mag-aaral, kung saan ginagamitan nila ito ng malalim at kognitibong paraan ng pagsusuri, na lubhang mahahasa ang kanilang isipan.

Programang upang mapaunlad ang Kahusayan sa Pagsusuri ng Pelikulang Panlipunan

Ang Talahanayan 11 ay nagpapakita ng nabuong Programang upang mapaunlad Kasuhasayan sa Pagsusuri ng Pelikulang Panlipunan sa Pagsusuri, Paghubog at Motibasyon.

Talahanayan 11. Programang upang mapaunlad ang Kahusayan sa Pagsusuri ng Pelikulang Panlipunan

Layunin	Istratehiya/ Aktibiti	Mga Kasangkot	Inaasahang Awtput
Matalakay ang pangunahing kaalaman sa Pelikula	Magbigyan ng seminar patungkol sa Pelikulang Panlipunan	Mga guro sa Filipino	Maging malinaw sa bawat isa ang kahalagahan ng Pelikulang Panlipunan
Malaman ang antas ng kaalaman ng mga mag-aaral sa Pelikulang Panlipunan	Makapagsuri ng iba't ibang pelikula	Mga mag-aaral na nasa ikatlong baitang ng Kolehiyo	Mabigyang pansin ang mga mag-aaral na makakakuha ng mababang marka
Mapataas ang antas ng mga mag-aaral sa pagsusuri ng pelikulang panlipunan	Pagkakaroon ng libro kung saan nakapaloob ang mga kasanayan sa pagsusuri ng pelikula.	Mga Guro sa Filipino mga mag-aaral na nasa ikatlong baitang sa Kolehiyo.	Tumaas ang kaalaman ng mga mag-aaral sa malalim na pagsusuri ng pelikula.

Ang programang interbensiyon ay isang suhestiyon at gawain na naglalayong mapaunlad ang kaalaman ng mga mag-aaral sa iba't ibang larangan. Sa interbensiyong ito ng pananaliksik ay makikita ang mga gawaing makatutulong upang mapalalim ang kaalaman ng mga mag-aaral patungkol sa pagsusuri ng pelikulang panlipunan.

Sa pag-aaral na ginawa ng mananaliksik ay makikitang walang makabuluhang epekto ang pagsusuri, paghubog at motibasyon sa kahusayan sa panood ng pelikulang panlipunan kung saan nilalayan ng mananaliksik na magkaroon ng libro ang bawat mag-aaral patungkol sa asignaturang sinesosyedad.



Maraming hakbang ang gagawin sa interbensyong ito, ngunit matatapos lamang ito sa tulong ng bawat isa kung saan kasangkot ang mga dekana, mga guro sa Filipino at mga mag-aaral na nasa ikatlong baitang sa kolehiyo.

4. KONKLUSYON AT REKOMENDASYON

Sa pagbibigay-linaw ng lagom ng mga natuklasan, ang mga sumusunod na konklusyon ay nabuo:

1. Ang haypotesis na nagsasabing walang makabuluhang epekto ang Pagsusuri, paghubog at motibasyon sa pagsusuri ng pelikulang panlipunan” ay bahagyang tinanggap.
2. Ang haypotesis na nagsasabing walang makabuluhang epekto ang kognitibong pag-aanalisa sa pagsusuri, paghubog at motibasyon ay tinanggap.
3. Ang haypotesis na nagsasabing walang makabuluhang epekto ang pagsusuri, paghubog at motibasyon sa kahusayan sa panonood ng pelikulang panlipunan ay tinanggap.

Batay sa mga kasagutan at konklusyon, ang mga sumusunod ang ibinigay na rekomendasyon:

1. Iminumungkahi ng mananaliksik sa mga kaguruan na mahikayat ang mga mag-aaral sa malalim na pagsusuri ng pelikulang panlipunan nang sa gayon ay mamulat ang mga mag-aaral sa mga aral na makukuha sa pinanood.
2. Hinahangad ng mananaliksik na gabayan ng mga magulang ang kanilang mga anak sa pag-aaral. Suportahan sa mga gawain gaya ng mga gawain sa asignaturang sinesosyedad, sapagkat marami ang matutunan sa mga pelikulang sinusuri.
3. Sa mga susunod na mananaliksik, ang pananaliksik na ito ay maaaring gawing gabay sa pagsasagawa ng pananaliksik. Nawa’y patuloy na isakatuparan ang paggawa ng ganitong uri ng pananaliksik.

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DETERMINANTS OF STUDENTS' WRITING SKILLS: A BASIS FOR A PROPOSED INTERVENTION PLAN

Saira Lyn Javines Obrador

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This research aimed to determine the significant effect of the teacher factors, student factors, and environmental factors affecting the writing skills of the students. The result of this study will be the basis of an intervention plan for the students.

This study is a descriptive survey type of research where quantitative data were obtained using the survey questionnaires as the main instruments. These survey questionnaires were divided into three main parts: the teachers' factor, students factor, and environmental factor on the writing skills of the students. Likewise, a researcher made rubric was used to determine the level of writings skills of the students. The respondents of this study was all eighteen (n=18) junior and senior high school teachers and ninety-six (n=96) senior high school students from different schools in Unisan District, Unisan, Quezon.

The results indicate that despite variations in experiences, the teachers demonstrate a high level of teaching skills and subject matter knowledge, indicating their effectiveness in facilitating writing skill development among students. Student perceived themselves as motivated, having a high positive attitude towards writing, showing interest in writing activities, achieving academically, and possessing learning styles conducive to writing instruction. The students perceive their classroom environment and parental involvement favorably in relation to their writing skills. Likewise, it implies the physical learning environment, availability of resources, management practices, and parental involvement support for their writing development. There is room for improvement in each aspect of writing skills, with the satisfactory to very satisfactory level of performance suggests that students possess a foundation upon which further development can be built.

It was revealed that there is a significant effect of the teacher factors, student factors, and environmental factors in the level of writing skills of the students. There is room for improvement in each aspect of writing skills that students possess a foundation upon which further development can be built and based on the level of writing skills of the students and significant effects of various factors on students' writing skills.

The findings underscore that despite the high level of teaching skills exhibited by the teachers, ongoing professional development programs should be implemented. Teachers should continue fostering intrinsic motivation among students by providing opportunities for autonomy, mastery, and purpose in their writing tasks. Teachers should continue emphasize on writing instruction, varied teaching strategies, and ongoing support for students' growth that can empower them to become confident and improve their level of writing skills across various contexts and disciplines and propose an intervention plan that provides a structured framework for addressing the identified areas of improvement in students' writing skills. By implementing targeted strategies, providing individualized support, and fostering a collaborative learning environment, teachers can empower students to build upon their existing foundation and achieve higher levels of proficiency in writing.

KEYWORDS: *determinants, writing skills, intervention plan*

1. INTRODUCTION

Writing has always been included in the list of the four language skills in the majority of English Language Teaching (ELT) programs. An increasing number of learners require English writing skills for academic or even professional purposes. Proficiency in language alone does not define effective writing; rather, it reflects a student's capacity for thought, critical analysis, and persuasive concept communication. According to the National Assessment of Educational Progress (NAEP) in the United States (National Center for Education Statistics, 2019), proficiency in writing is a sign of academic achievement and is associated with success in a variety of disciplines. Therefore, for educators looking to improve their students' educational experience, knowing the factors influencing these skills is crucial.

With the advent of the K-12 Basic Education Curriculum, students are confronted with different academic writing tasks (Roxas, 2020). Senior high school exposes students to a wider

range of subjects that all rely on clear and concise communication. Strong writing skills empower them to excel in science by crafting detailed lab reports, analyzing historical events persuasively in essays, and communicating complex mathematical concepts clearly. Senior High School students must also learn to write so that they may convey their ideas, thoughts, opinions, and attitudes. They are competent in communicating ideas, sentiments, persuading, and influencing people via writing, especially in an educational setting. Hence, in the context of students' needs, writing is on level with other language skills.

However, many students struggle with developing these skills. Data from the Southeast Asia Primary Learning Metrics (SEA-PLM) 2019 showed the percentage of Grade 5 Filipino students who achieved minimum proficiency in reading and writing was significantly lower than the neighboring countries in South East Asia (Balinbin, 2020, December 3). Also, the result revealed that in writing, only 6 percent of Filipinos met



the expected writing proficiency of their grade level, while nearly half of Filipinos belonged to the lowest proficiency level (Shaw, 2023, April 17). It is evident in the several studies that students often struggle with a shallow vocabulary base, particularly in English, which is the primary medium of instruction. Weak grammar skills can hinder clear and concise communication in writing.

To address this issue, it is essential to understand the key factors that influence students' writing abilities such as teachers, students, and writing environment factors. These factors interact to influence the development of students' English writing ability (Wang & Troia, 2023). It is important to recognize that these factors do not operate in isolation but interact dynamically to shape students' writing outcomes.

This research aims to identify the major determinants of students' writing skills, which will serve as the foundation for a proposed intervention plan. Understanding the determinants of students' writing skills is an essential first step for developing effective interventions. This research project aims to identify these factors and propose an evidence-based intervention plan to enhance students' writing abilities.

1.1 Statement of the Problem

Specifically, this study sought to answer the following questions:

1. What is the level of teacher factors in the writing skills of the students in terms of:
 - 1.1. Teaching Skills;
 - 1.2. Knowledge on the Subject Matter; and
 - 1.3. Attitude?
2. What is the level of student factors in the writing skills of the students in terms of:
 - 2.1. Motivation;
 - 2.2. Attitude;
 - 2.3. Interest;
 - 2.4. Academic Achievement; and
 - 2.5. Learning Styles?
3. What is the level of writing environmental factors in the writing skills of the students in terms of:
 - 3.1. Classroom Structure;

- 3.2. Classroom Resources;
- 3.3. Classroom Management; and
- 3.4. Parental Support?
4. What is the level of the writing skills of the students in terms of:
 - 4.1. Focus;
 - 4.2. Development;
 - 4.3. Unity;
 - 4.4. Coherence; and
 - 4.5. Correctness?
5. Is there a significant effect of the teacher factors, student factors, and environmental factors in the level of writing skills of the students?
6. What output can be developed to enhance the writing skills of the students?

2. METHODOLOGY

Descriptive survey type of research was adopted and applied in this study where quantitative data were obtained using the survey questionnaire as the main instrument. In addition, the researcher followed these phases: (1) determining the factors that affect the writing skills of the students such as: teacher's factors, student's factors, and environmental factors; (2) finding out the level of writing skills of the students; (3) analyzing the significant effect of the teacher factors, student factors, and writing environmental factors in the level of writing skills of the students; and (4) developing intervention plan based on the determinants of the writing skills of the students.

3. RESULTS AND DISCUSSION

This chapter presents, analyzes and interprets the data gathered that showed significant effect of the teacher factors, student factors, and writing environmental factors in the level of writing skills of the students.

Teacher Factors in the Writing Skills of the Students

Teachers' factors in the writing skills of the students include teaching skill, knowledge of the subject matter and attitude. Mean and standard deviation was used to determine teaching skill, knowledge of the subject matter and attitude.

Table 1. Teacher Factors in the Writing Skills of the students in terms of Teaching Skills

Indicators	Mean	SD	Remarks
1. I effectively set clear goals and objectives for students' writing development.	4.20	0.45	Strongly Agree
2. I use varied instructional methods to engage students in the writing process.	4.40	0.55	Strongly Agree
3. I incorporate diverse writing genres (narrative, expository, persuasive, etc.) into my teaching.	4.60	0.55	Strongly Agree
4. I adapt my teaching approach to address the diverse learning styles of my students.	4.20	0.45	Agree
5. I encourage a positive and supportive writing environment in my classroom.	5.00	0.00	Strongly Agree
Overall Mean	4.48		Strongly Agree
Verbal Interpretation	Very High		

Table 1 gleans the teachers' factors in the writing skills of the students in terms of teaching skills. Teachers strongly agree that

they encourage positive and supportive environment in their classroom (M= 5.00). They adapt teaching approach to address



the diverse learning style of the students and effectively set clear goal and objectives for students writing development (M= 4.20)

The overall mean of 4.48 and the standard deviation is 0.48 indicate a very high level of teaching skills. This means that the teacher demonstrates exceptional proficiency in most areas of teaching skills related to students' writing development, with particularly outstanding performance in using varied instructional methods and fostering a positive and supportive writing environment.

On the next page, Table 6 gleans the teachers' factors in the writing skills of the students in terms of knowledge on the subject matter. Teachers strongly agree that they are knowledgeable about the strategies to support students with different learning styles and abilities in writing and they effectively assess student's writing skills and provide constructive feedback (M= 4.80). However, they only agree that they are familiar with various writing models and approaches used in teaching writing skills (M= 4.20).

Table 2. Teacher Factors in the Writing Skills of the students in terms of Knowledge on the Subject Matter

Indicators	Mean	SD	Remarks
1. I am familiar with various writing models and approaches used in teaching writing skills.	4.20	0.84	Agree
2. I am confident in my understanding of the writing process and its stages (prewriting, drafting, revising, editing, publishing).	4.60	0.55	Strongly Agree
3. I am knowledgeable about strategies to support students with different learning styles and abilities in writing.	4.80	0.45	Strongly Agree
4. I proficiently teach grammar and mechanics effectively within the context of writing.	4.40	0.55	Strongly Agree
5. I can effectively assess students' writing abilities and provide constructive feedback.	4.80	0.45	Strongly Agree
Overall Mean	4.56		Strongly Agree
Verbal Interpretation	Very High		

The overall mean of 4.56 and the standard deviation of 0.54 indicate a very high level of knowledge on the subject matter. This implies that teachers generally have a high level of knowledge and skills related to teaching writing among their students. Particularly, it implies a strong proficiency in

supporting students with different learning styles and abilities, and in assessing and providing feedback on student writing abilities. However, there may be some room for improvement in terms of familiarity with various writing models and approaches.

Table 3. Teacher Factors in the Writing Skills of the students in terms of Attitude

Indicators	Mean	SD	Remarks
1. I believe that my attitude towards writing influences my students' attitudes.	4.80	0.45	Strongly Agree
2. I am enthusiastic about introducing creative and engaging writing activities in my classroom.	4.80	0.45	Strongly Agree
3. I see value in incorporating real-world applications and relevance into writing instruction.	4.80	0.45	Strongly Agree
4. I am committed to creating an inclusive and supportive environment for all students in my writing classroom.	4.80	0.45	Strongly Agree
5. I believe that developing strong writing skills is crucial for students' overall academic success.	4.80	0.45	Strongly Agree
Overall Mean	4.80		Strongly Agree
Verbal Interpretation	Very High		

Table 3 shows the teachers factors in the writing skills of the students in terms of attitude. Teachers strongly agree in all indicators: they believe that their attitude towards writing influences their student's attitude; they are enthusiastic about introducing creative and engaging writing activities in their class; they see value in incorporating real-world applications and relevance into writing instruction; they are committed to

creating an inclusive and supportive environment for all students in their classroom; and they believe that developing strong writing skills is crucial for their students overall academic success. These indicators obtained the mean of (M= 4.80).

The overall mean of 4.80, and the standard deviation is 0.37.



indicate a very high level of teaching skills. This implies that teachers demonstrate a strong positive attitude towards writing, as evidenced by their strong agreement across all indicators. Seemingly, positive attitude among teachers has significant implications for creating a supportive and engaging learning environment, promoting creative and effective writing instruction, and fostering holistic academic success among

students.

Student Factors in the Writing Skills of the Students

Students’ factors in writing skills of the students comprises motivation, attitude interest academic achievements and learning style and was determined by mean and standard deviation.

Table 4. Student Factors in the Writing Skills of the students in terms of Motivation

Indicators	Mean	SD	Remarks
1. I find writing to be a rewarding activity.	3.44	0.79	Agree
2. I am motivated to express my thoughts and ideas through writing activities.	3.66	0.88	Agree
3. I see writing as a way to explore and develop my creativity.	3.77	0.92	Agree
4. I know that improving my writing skills is important to succeed academically.	4.02	0.95	Agree
5. I believe that strong writing skills are important for my future career or personal goals.	3.98	0.99	Agree
Overall Mean	3.78		Agree
Verbal Interpretation	High		

Table 4 presents the student factors in writing skill of the students in terms of motivation. Students agree that improving their writing skill is important to succeed academically (M= 4.02). They find writing a rewarding activity (M=3.44).

The overall mean of 3.78 and standard deviation of 0.93 indicate a high level of motivation on the writing skill of the

students. They realize the importance and value of writing skills, seeing writing as rewarding, expressive, and crucial for academic and future career success. Thus, teachers can make the most on students' intrinsic motivation by providing meaningful writing experiences and constant support to foster continued growth and success in their writing skills.

Table 5. Student Factors in the Writing Skills of the Students in terms of Attitude

Indicators	Mean	SD	Remarks
1. I find writing activities to be engaging experiences.	3.51	0.77	Agree
2. I feel a sense of accomplishment when completing a well-written piece.	3.61	0.78	Agree
3. I am optimistic to revise and edit my writing to make it better.	3.42	0.93	Agree
4. I feel supported in enhancing my writing skills through receiving feedback from my teachers.	3.89	0.89	Agree
5. I appreciate the connection between writing skills and real-life applications.	3.66	0.89	Agree
Overall Mean	3.63		Agree
Verbal Interpretation	High		

Table 5 presents the student factors in writing skill of the students in terms of attitude. Students agree that they feel supported in enhancing their writing skills through receiving feedback from their teachers (M= 3.89). They are optimistic to revise and edit their writing to make it better (M=3.42).

The overall mean of 3.62 and standard deviation of 0.87 indicate a high level of attitude in writing skill of the students. This suggests that students generally demonstrate a positive attitude towards developing their writing skills, feeling supported in their efforts through feedback from teachers, and expressing optimism towards revising and editing their writing. This positive attitude is indicative of a conducive writing

environment where students are encouraged to engage actively in the writing process and strive for continuous improvement.

Table 6 presents the student factors in writing skill of the students in terms of interest. Students agree that they are comfortable using technology tools such as word processors or online platforms, in their writing activities (M= 3.69). However, they moderately agree that they actively seek opportunities to participate in writing activities (M=3.28).

The overall mean of 3.57 and standard deviation of 0.90 indicate a high level of interest in writing skill of the students. This implies that while students demonstrate a high level of comfort with technology in writing activities, there is potential



to further enhance their active participation and engagement in writing tasks.

Table 6. Student Factors in the Writing Skills of the Students in terms of Interest

Indicators	Mean	SD	Remarks
1. I am interested in exploring different writing genres (narrative, persuasive, expository, etc.).	3.58	0.93	Agree
2. I find that reflective or journaling activities support my learning in writing	3.64	0.84	Agree
3. I actively seek opportunities to participate in writing activities.	3.28	0.93	Moderately Agree
4. I am always open to trying new and challenging writing tasks to enhance my skills.	3.66	0.84	Agree
5. I am comfortable using technology tools, such as word processors or online platforms, in my writing activities.	3.69	0.91	Agree
Overall Mean	3.57		Agree
Verbal Interpretation	High		

This also suggests that by integrating technology effectively, designing stimulating writing activities, and fostering intrinsic motivation and a growth mindset towards writing, teachers can

nurture students' interest and enthusiasm for writing and facilitate their development.

Table 7. Student Factors in the Writing Skills of the Students in terms of Academic Achievement

Indicators	Mean	SD	Remarks
1. I believe my writing skills are appropriate for my grade level.	3.60	0.86	Moderately Agree
2. I consider writing to be one of my academic strengths.	3.65	0.87	Agree
3. I notice clear improvements in the quality of my written work.	3.30	0.91	Moderately Agree
4. I have effectively utilized my writing skills in various subjects.	3.69	0.89	Agree
5. I foresee my writing skills being beneficial in my future academic and professional endeavors.	3.62	0.95	Agree
Overall Mean	3.57		Agree
Verbal Interpretation	High		

Table 7 presents the student factors in writing skill of the students in terms of academic achievement. Students agree that they have effectively utilized their writing skills in various subjects (M= 3.69). However, they moderately agree that they notice clear improvements in their quality of their written work (M=3.30).

The overall mean of 3.57 and standard deviation of 0.91 indicate a high level of academic achievement in writing skill

of the students. It is evident that students demonstrate a high level of academic achievement in writing skills, but there is potential to further enhance their perception of improvement and growth in their writing abilities. By promoting reflective practice, encouraging a growth mindset, and integrating writing across subjects, teachers can empower students to realize their full potential as better writers and achieve academic success in writing.

Table 8. Student Factors in the writing Skills of the Students in terms of Learning Styles

Indicators	Mean	SD	Remarks
1. I thrive when provided with clear instructions and guidelines for writing tasks.	3.89	3.09	Agree
2. I find that visual aids, such as charts or diagrams, enable my understanding of writing concepts.	3.41	0.93	Moderately Agree
3. I prefer hands-on or interactive writing activities to enrich my learning	3.44	0.89	Moderately Agree
4. I benefit from listening to explanations or participating in discussions about writing.	3.44	0.84	Moderately Agree



5. I enjoy actively collaborating with peers on group writing projects.	3.80	0.94	Agree
Overall Mean	3.60		Agree
Verbal Interpretation	High		

Table 8 presents the student factors in writing skill of the students in terms of learning styles. Students agree that they thrive when provided with clear instructions and guidelines for writing tasks (M= 3.89). However, they moderately agree that they find that visual aids, such as charts or diagrams, enable their understanding of writing concepts (M=3.41).

The overall mean of 3.60 and standard deviation of 1.61 indicate a high level of learning styles in writing skill of the students. This implies that students have different preferences for instructional approaches. By providing clear instructions, incorporating visual aids, and adopting a differentiated approach to instruction, teachers can create inclusive learning environments that support students in developing their writing

skills and reaching their full potential as better writers.

Writing Environmental Factors in the Writing Skills

Writing environmental factors in writing skills of the students includes classroom structure, classroom resources, classroom management and parental support and was determine by mean and standard deviation.

Table 9 on the next page reveals the writing environment factors in writing skill of the students in terms of classroom structure. Respondents agree that the classroom need to be well-organized for writing activities(M= 3.65). Subsequently, they moderately agree that classroom has a dedicated space or area for quiet and focused writing (M=3.28).

Table 9. Writing Environmental factors in the Writing Skills of the Students in terms of Classroom Structure

Indicators	Mean	SD	Remarks
1. The classroom is well-organized for writing activities.	3.65	0.94	Agree
2. The classroom environment is conducive to focus on writing activities.	3.43	0.90	Agree
3. The classroom has a dedicated space or area for quiet and focused writing.	3.28	1.05	Moderately Agree
4. The classroom structure encourages creativity and expression in writing.	3.35	0.92	Moderately Agree
5. The classroom promotes a positive and supportive atmosphere for writing.	3.34	1.05	Moderately Agree
Overall Mean	3.41		Agree
Verbal Interpretation	High		

The overall mean of 3.41 and the standard deviation of 0.98 generally show positive perception of environmental factors in the writing skills of students in terms of classroom structure.

Participants perceive the influence of classroom structure on students' writing skills to be positively impactful.

Table 10. Writing Environmental factors in the Writing Skills of the Students in terms of Classroom Resources

Indicators	Mean	SD	Remarks
1. The classroom provides a range of writing tools, from traditional to digital.	3.41	1.01	Moderately Agree
2. There is a variety of books and reading materials available to support writing activities.	3.47	0.99	Agree
3. The classroom is equipped with computers or other devices for research and typing.	3.34	0.93	Moderately Agree
4. The teacher provides access to online resources and tools for writing.	3.35	1.11	Moderately Agree
5. There are opportunities to use multimedia resources (videos, audio, images) in writing tasks.	3.46	1.01	Moderately Agree
Overall Mean	3.41		Agree
Verbal Interpretation	High		

Table 10 illustrates the writing environment factors in writing skill of the students in terms of classroom resources. Respondents agree that there is a variety of books and reading materials available to support writing activities (M= 3.65). However, they moderately agree that the classroom is

equipped with computers or other devices for research and typing (M=3.28).



The overall mean of 3.41 and the standard deviation of 1.01 generally show positive perception of environmental factors in the writing skills of students in terms of classroom resources. This implies that the respondents generally perceive the classroom environment positively in terms of resources for writing skills. Subsequently, there is potential to further

enhance the availability of technological resources to support students' writing activities. By providing a rich and diverse array of resources, including both traditional and technological resources, teachers can create an environment that fosters creativity, critical thinking, and effective communication skills in writing.

Table 11. Writing Environmental Factors in the Writing Skills of the students in terms of Classroom Management

Indicators	Mean	SD	Remarks
1. Classroom rules are consistently enforced during writing activities.	3.57	0.92	Agree
2. The teacher provides clear instructions for writing tasks.	3.57	0.92	Agree
3. Students are encouraged to respect each other's space and concentration during writing activities.	3.55	1.08	Agree
4. The teacher encourages a collaborative and supportive writing community within the classroom.	3.55	1.04	Agree
5. The classroom environment promotes a sense of responsibility and accountability during writing activities.	3.45	1.00	Agree
Overall Mean	3.54		Agree
Verbal Interpretation	High		

Table 11 gleans the writing environment factors in writing skill of the students in terms of classroom management. Respondents agree that the classroom rules are consistently enforced during writing activities and the teacher provides clear instructions for writing tasks (M= 3.57). They agree that the classroom environment promotes a sense of responsibility and accountability during writing activities (M=3.45).

responsibility and accountability. Thus, effective classroom management is essential for creating a conducive learning environment that supports students' writing skills development and fosters a culture of academic excellence and achievement.

The overall mean of 3.54 and the standard deviation of 0.99 generally show positive perception of environmental factors in the writing skills of students in terms of classroom resources. Respondents generally perceive a positive writing environment in terms of classroom management, characterized by consistent enforcement of rules, clear instructions, and a promotion of

Table 12 on the next page shows the writing environment factors in writing skill of the students in terms of parental support. Respondents agree that their parents provide a quiet and supportive environment for them to work on writing assignments (M= 3.59). On the other hand, they moderately agree that their parents assist in researching or gathering information of their writing assignments when needed (M=3.14).

Table 12. Writing Environmental Factors in the Writing Skills of the Students in terms of Parental Support

Indicators	Mean	SD	Remarks
1. My parents provide a quiet and supportive environment for me to work on writing assignments.	3.59	1.21	Agree
2. My parents encourage me to engage in writing activities at home.	3.42	1.05	Agree
3. I receive positive reinforcement and praise from my parents for my writing efforts.	3.52	1.03	Agree
4. My parents help create a routine that allows time for writing activities at home.	3.16	1.15	Moderately Agree
5. My parents assist in researching or gathering information for writing assignments when needed.	3.14	1.22	Moderately Agree
Overall Mean	3.43		Agree
Verbal Interpretation	High		

The overall mean of 3.43 and the standard deviation of 1.08 generally show positive perception of environmental factors in the writing skills of students in terms of parental support. This

implies that there is potential for increased parental involvement in assisting students with research and gathering information for writing assignments. By fostering



communication, collaboration, and partnership between home and school, teachers can leverage parental support to enhance students' writing skills development and academic achievement.

Level of the Writing Skills of the Students

The level of the writing skills of exhibited by the students focusing on key aspects such as focus, development, unity, coherence, and correctness.

Table 13 illustrates the level of writing skills of the students in terms of different indicators such as focus, development, unity, coherence and correctness with the following means of 2.68, 2.42, 2.23, 2.21, and 2.54, respectively.

The remarks for focus and correctness indicate a very satisfactory level of writing skills among the students, while development, unity, and coherence are satisfactory level with slight variations in the perceived strengths and weaknesses across different aspects.

Table 13. Level of the Writing Skills of the Students

Indicators	Mean	SD	Remarks
Focus	2.68	0.71	Very Satisfactory
Development	2.42	0.83	Satisfactory
Unity	2.23	0.70	Satisfactory
Coherence	2.21	0.69	Satisfactory
Correctness	2.54	0.58	Very Satisfactory

While the overall level of writing skills among the students is deemed satisfactory, there are opportunities for targeted instructional support to address specific areas of weakness and further enhance students' writing proficiency. By providing focused instruction, feedback, and opportunities for revision, teachers can empower students to become more proficient and effective writers across all dimensions of writing.

Significant Effect of the Teacher Factors, Student Factors, and Environmental Factors in the Level of Writing Skills of the Students

This examines specific factors such as teacher factor, students factor, and environmental factor to provide a comprehensive understanding of the factors influencing students' writing abilities. The following tables provide a detailed analysis of the significant effects of these factors on the level of writing skills exhibited by students. Each table probes into specific factors within these categories to elucidate their effect on students' writing abilities.

Table 14 summarizes the significant effects of various teacher factors on the level of writing skills among students, including their age, educational attainment, years of experience, teaching skills, knowledge of the subject matter, and attitude.

Teachers' factors in terms of age (p= 0.019), teaching skills (p= 0.032), and attitude (p= 0.025) have significant effect on level of writing skills of the students in terms of focus. Moreover, age (p=0.014), years of experience (p= 0.008), and knowledge of the subject matter (p= 0.037) have significant effect on level of writing skills of the students in terms of development. In terms of unity, educational attainment (p=0.033) and years of experience have a significant effect on the students writing

skills. Likewise, educational attainment (p= 0.032), teaching skills (p= 0.021), subject of the subject matter (p= 0.015) has significant effect on level of writing skills of the students in terms coherence. Moreover, years of experience (p= 0.022) teaching skills (p= 0.001) and knowledge of the subject matter (p= 0.041) has significant effect on level of writing skills of the students in terms correctness. factors such as age, teaching skills, and attitude significantly influence students' writing skills in terms of focus. Younger teachers, those with stronger teaching skills, and a positive attitude towards writing instruction may contribute to improved focus in students' writing.

On the students' writing skills in terms of development, age, years of experience, and knowledge of the subject matter have significant effects. This implies that older teachers, more experienced teachers, and those with a deeper understanding of the subject matter may facilitate the development of students' writing skills by providing comprehensive and insightful instruction.

In terms of unity, the analysis reveals that educational attainment and years of experience among teachers have a significant effect on students' writing skills. This suggests that educators who have pursued advanced degrees or received specialized training may possess a deeper understanding of writing principles and instructional strategies, enabling them to foster greater unity in students' written work. Additionally, experienced teachers, who have spent more time honing their craft in the classroom, often possess a wealth of practical knowledge, instructional techniques, and insights into effective writing practices.



Table 14. Significant Effect of the Teachers' factors in the Level of Writing Skills of the Students

Teachers' Factors	Level of Writing Skills of the Students	Beta	SE	95% CI		β	P
				LL	UL		
Teaching Skills	Focus	-1.232	2.318	-8.608	6.144	-0.498	0.032*
Knowledge on the Subject Matter		-4.420	2.442	12.191	3.350	-2.935	0.068
Attitude		6.326	4.154	-6.895	19.547	3.772	0.025*
Teaching Skills	Development	-3.551	2.884	12.729	5.628	-1.504	0.306
Knowledge on the Subject Matter		-6.123	3.038	15.792	3.546	-4.259	0.037*
Attitude		9.087	5.169	7.364	25.538	5.677	0.077
Teaching Skills	Unity	-0.217	4.036	13.061	12.627	-0.092	0.960
Knowledge on the Subject Matter		-1.957	4.252	15.488	11.575	-1.361	0.677
Attitude		2.087	7.234	20.935	25.109	1.304	0.792
Teaching Skills	Coherence	-2.029	1.585	7.074	3.016	1.022	0.021*
Knowledge on the Subject Matter		-3.678	1.670	8.992	1.637	3.042	0.015*
Attitude		5.478	2.841	3.564	14.52	4.069	0.049*
Teaching Skills	Correctness	-0.797	1.885	6.795	5.201	-0.721	0.001*
Knowledge on the Subject Matter		-1.757	1.986	8.076	4.562	-2.609	0.041*
Attitude		2.652	3.378	8.099	13.403	3.536	0.49

Note: * $p < .05$.

Seemingly, educational attainment, teaching skills, and knowledge of the subject matter significantly impact students' writing skills in terms of coherence. Teachers with higher educational attainment, stronger teaching skills, and a deeper understanding of the subject matter may foster greater coherence in students' writing through effective instructional strategies and content knowledge.

Also, years of experience, teaching skills, and knowledge of the subject matter significantly affect students' writing skills in terms of correctness. Experienced teachers with strong teaching skills and extensive subject matter knowledge may contribute to improved correctness in students' writing by

providing accurate guidance, feedback, and support.

Table 15 shows the significant effects of various student factors on the level of writing skills among students, including their motivation, attitude, interest, academic achievement, and learning styles.

Student' factors in terms of motivation ($p= 0.023$), attitude ($p= 0.049$), and academic achievement ($p= 0.045$) have significant effect on level of writing skills of the students in terms of focus. Moreover, interest ($p=0.015$), academic achievement ($p= 0.015$), and learning styles ($p= 0.006$) have significant effect on level of writing skills of the students in terms of development.

Table 15. Significant effect of the Student Factors in the level of Writing skills of the Students

Students Factors	Level of Writing Skills of the Students	Beta	SE	95 % CI		B	P
				LL	UL		
Motivation	Focus	0.220	0.179	0.136	0.577	0.193	0.023*
Attitude		-0.142	0.200	0.54	0.256	-0.124	0.049*
Interest		0.103	0.236	0.367	0.573	0.090	0.664
Academic Achievement		-0.244	0.209	0.659	0.17	-0.224	0.045*
Learning Styles		0.042	0.102	0.161	0.245	0.052	0.683
Motivation	Development	-0.028	0.191	0.408	0.351	-0.023	0.883
Attitude		-0.087	0.213	0.511	0.336	-0.072	0.683
Interest		0.336	0.252	0.164	0.836	0.276	0.015*
Academic Achievement		-0.304	0.222	0.745	0.138	-0.262	0.015*
Learning Styles		-0.073	0.109	0.289	0.143	-0.084	0.006*



Motivation		0.112	0.198	0.282	0.506	0.086	0.575
Attitude		-0.075	0.221	0.515	0.365	0.058	0.036*
Interest	Unity	0.428	0.261	0.091	0.947	0.328	0.005*
Academic Achievement		-0.350	0.231	0.809	0.108	0.283	0.032*
Learning Styles		-0.081	0.113	0.306	0.143	0.089	0.472
Motivation		0.155	0.192	0.227	0.537	0.122	0.023*
Attitude		-0.149	0.214	0.576	0.277	-0.118	0.048*
Interest	Coherence	0.416	0.253	0.087	0.92	0.327	0.014*
Academic Achievement		-0.374	0.223	0.818	0.071	-0.308	0.018*
Learning Styles		-0.061	0.109	0.278	0.157	-0.067	0.581
Motivation		0.057	0.141	0.223	0.337	0.062	0.008*
Attitude		-0.012	0.157	0.324	0.3	0.013	0.041*
Interest	Correctness	0.177	0.186	0.191	0.546	0.192	0.042*
Academic Achievement		-0.289	0.164	0.615	0.036	0.33	0.081
Learning Styles		-0.019	0.08	0.178	0.141	0.029	0.017*

Note: * $p < .05$.

In addition, attitude ($p=0.036$), interest ($p=0.005$), and academic achievement ($p=0.032$) have significant effect on level of writing skills of the students in terms of unity. Likewise, Motivation ($p= 0.023$), attitude ($p= 0.048$), interest ($p=0.014$), and academic achievement (0.018) have significant effect on level of writing skills of the students in terms coherence. Moreover, motivation ($p=0.008$), attitude ($p=0.041$), interest ($p=0.041$), and learning style ($p=0.017$) have significant effect on level of writing skills of the students in terms correctness.

Motivation, attitude, and academic achievement significantly effect students' writing skills in terms of focus. This suggests that students who are motivated, have a positive attitude towards writing, and achieve academically are more likely to demonstrate focused on writing, where the main idea is clear and well-developed.

Interest, academic achievement, and learning styles have a significant effect on students' writing skills in terms of development. Students who are interested in writing, achieve academically, and possess learning styles conducive to writing instruction are more likely to produce well-developed written work with thorough exploration of ideas and effective organization.

Attitude, interest, and academic achievement significantly impact students' writing skills in terms of unity. Students with a positive attitude towards writing, a genuine interest in the topic, and strong academic achievement are more likely to create cohesive and well-structured writing, maintaining logical connections between ideas.

Motivation, attitude, interest, and academic achievement have a significant effect on students' writing skills in terms of coherence. Motivated students with a positive attitude, genuine interest, and strong academic achievement are more likely to produce coherent writing, presenting information in a structured and organized manner.

Motivation, attitude, interest, and learning styles significantly influence students' writing skills in terms of correctness. Motivated students with a positive attitude, genuine interest, and compatible learning styles are more likely to produce correct writing, demonstrating mastery of language conventions such as grammar, punctuation, and spelling.

Table 16 shows the significant effects of various environmental factors on the level of writing skills among students, including classroom structure, classroom resources, classroom management, and parental support. Environmental' factors in terms of classroom structure ($p= 0.036$), classroom resources ($p= 0.025$), and parental support ($p= 0.031$) have significant support ($p= 0.023$) have significant effect on level of writing skills of the students in terms of development. In addition, classroom structure ($p=0.021$), classroom resources ($p=0.016$), classroom management ($p=0.035$), and parental support ($p=0.035$) have significant effect on level of writing skills of the students in terms of unity. Likewise, classroom structure ($p=0.016$) and parental support ($p=0.026$) have significant effect on level of writing skills of the students in terms coherence. Moreover, classroom resources ($p=0.024$) and parental support ($p=0.032$) have significant effect on level of writing skills of the students in terms correctness.



Table 16. Significant effect of the Environmental factors in the level of Writing Skills of the Students

Environmental Factors	Level of Writing Skills of the Students	Beta	95 % CI				P
			SE	LL	UL	B	
Classroom Structure	Focus	-0.155	0.182	0.516	0.206	-0.162	0.036*
Classroom Resources		-0.087	0.177	0.438	0.264	-0.093	0.025*
Classroom Management		0.005	0.167	0.327	0.337	0.005	0.977
Parental Support		0.117	0.12	0.121	0.355	0.148	0.031*
Classroom Structure	Development	-0.222	0.193	0.607	0.162	-0.218	0.024*
Classroom Resources		-0.05	0.188	0.424	0.324	-0.05	0.790
Classroom Management		0.14	0.178	0.213	0.493	0.142	0.033*
Parental Support		0.063	0.127	0.19	0.316	0.075	0.023*
Classroom Structure	Unity	-0.222	0.201	0.622	0.177	0.204	0.021*
Classroom Resources		-0.276	0.195	0.664	0.112	0.259	0.016*
Classroom Management		0.063	0.185	0.304	0.429	0.059	0.035*
Parental Support		0.137	0.132	0.127	0.400	0.152	0.035*
Classroom Structure	Coherence	-0.265	0.195	0.652	0.122	-0.249	0.016*
Classroom Resources		-0.206	0.189	0.582	0.17	-0.199	0.279
Classroom Management		0.079	0.179	0.277	0.434	0.076	0.661
Parental Support		0.127	0.128	0.128	0.382	0.144	0.026*
Classroom Structure	Correctness	0.076	0.143	0.207	0.36	0.099	0.593
Classroom Resources		-0.318	0.139	0.593	-0.042	0.422	0.024*
Classroom Management		0.036	0.131	0.225	0.296	0.048	0.785
Parental Support		0.143	0.094	0.044	0.33	0.224	0.032*

Note: * $p < .05$.

Classroom structure, classroom resources, and parental support significantly influence students' writing skills in terms of focus. A conducive classroom environment with clear structure, adequate resources, and supportive parental involvement can foster students' ability to maintain a focused and coherent main idea in their writing.

Classroom structure, classroom management, and parental support have a significant effect on students' writing skills in terms of development. An organized classroom environment, effective management strategies, and supportive parental involvement contribute to students' ability to develop ideas and expand their writing with depth and clarity.

Classroom structure, classroom resources, classroom management, and parental support significantly impact students' writing skills in terms of unity. A well-structured classroom layout, access to relevant resources, efficient management practices, and supportive parental engagement facilitate students' ability to maintain coherence and logical connections in their writing.

Classroom structure and parental support have a significant effect on students' writing skills in terms of coherence. An organized classroom environment and supportive parental involvement contribute to students' ability to present

information in a structured and cohesive manner, enhancing the overall coherence of their writing.

Classroom resources and parental support significantly influence students' writing skills in terms of correctness. Access to appropriate resources and supportive parental involvement contribute to students' mastery of language conventions, including grammar, punctuation, and spelling, thereby improving the correctness of their writing.

4. CONCLUSION AND RECOMMENDATIONS

Based on the initial findings, the following conclusions were drawn from the study.

Teachers' factors in terms of teaching skills and attitude have significant effect on level of writing skills of the students in terms of focus. Knowledge of the subject matter has a significant effect on level of writing skills of the students in terms of development. Teaching skills and knowledge of the subject matter have a significant effect on level of writing skills of the students in terms coherence. Moreover, teaching skills and knowledge of the subject matter have a significant effect on level of writing skills of the students in terms correctness.

Student' factors in terms of motivation, attitude, and academic achievement have significant effect on level of writing skills of the students in terms of focus. Interest, academic achievement,



and learning styles have significant effect on level of writing skills of the students in terms of development. In addition, attitude, interest, and academic achievement have significant effect on level of writing skills of the students in terms of unity. Likewise, motivation, attitude, interest, and academic achievement have significant effect on level of writing skills of the students in terms coherence. Moreover, motivation, attitude, interest, and learning style have significant effect on level of writing skills of the students in terms correctness.

Environmental' factors in terms of classroom structure, classroom resources, and parental support have significant effect on level of writing skills of the students in terms of focus. Classroom structure, classroom management and parental support have significant effect on level of writing skills of the students in terms of development. In addition, classroom structure, classroom resources, classroom management, and parental support have significant effect on level of writing skills of the students in terms of unity. Likewise, classroom structure and parental support have significant effect on level of writing skills of the students in terms coherence. Classroom resources and parental support have significant effect on level of writing skills of the students in terms correctness.

In light of the findings and conclusions, the following were recommended:

1. Despite the high level of teaching skills exhibited by the teachers, ongoing professional development programs should be implemented. These programs can focus on advanced writing instruction strategies, incorporating new methodologies, and staying updated with the latest research in writing pedagogy.
2. Teachers should continue fostering intrinsic motivation among students by providing opportunities for autonomy, mastery, and purpose in their writing tasks. Encourage students to set personal writing goals and highlights their achievements, promoting a sense of ownership and self-directed learning. Create a supportive and encouraging classroom environment where students feel valued and empowered to express their ideas and opinions through writing.
3. By conducting further research in these environmental factors, teachers, administrators and policymakers can gain valuable insights into the factors that contribute to a supportive learning environment for writing instruction and inform evidence-based practices to enhance students' writing skills effectively.

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TEACHER INDUCTION PROGRAM (TIP) TO THE TEACHERS' GOAL ATTAINMENT, METACOGNITION AND WELL-BEING

Kimberly An Aquino Tirad

Laguna State Polytechnic University Sta. Cruz Laguna 4009 PHILIPPINES

ABSTRACT

This study entitled The Teacher Induction Program (TIP) to the Teachers' Goal Attainment, Metacognition and Well-Being. Specifically, the research examines several key areas: the level of TIP in terms of School Dimension, Teaching process, Learning process, and School and Community Linkages. Additionally, it evaluates the level of Teachers' Goal Attainment and Well-being, and the significant relationship between Teacher Induction Program and Teachers' Goal Attainment, Metacognition, and Well-being.

The research design utilized the descriptive survey method of research with a self-made questionnaire as the main data-gathering instrument. The study involved a total of 201 newly hired teachers from 20 selected public high schools within the Schools Division of Office of Calamba City.

The findings reveal that the Teacher Induction Program (TIP) is perceived to be a very great extent across various dimensions, including school dimension, teaching process, learning process, and school and community linkages. Additionally, teacher's goal attainment, metacognition, and well-being were all rated to very great extent. Moreover, the study identifies significant positive relationships between the Teacher Induction Program and teachers' goal attainment which includes vision, goals, motivations, actions, and self-regulations; metacognition under knowledge, experiences, and strategies, and well-being encompassing physical, mental, and social aspects. These findings underscore the pivotal role of TIP in supporting professional growth and holistic well-being among novice educators.

Based on the preceding findings, the study concludes that the TIP exhibits a significant relationship to the teachers' goal attainment, metacognition, and well-being, underscoring its crucial role in enhancing these areas. The hypotheses stated were all rejected this indicates that comprehensive induction programs can positively influence novice teachers' professional development and overall well-being.

Based on these conclusions, the study recommends active participation of newly hired teachers in TIP, continued support from mentor teachers and school administrators, policy formulation considering these findings, and further research to explore the relationships in more depth and different contexts.

KEYWORDS: *teacher induction program, goal attainment, metacognition, well-being, effectiveness*

1. INTRODUCTION

The education sector has a deep influence on the future path of society. The quality of education that students receive significantly affects their future opportunities and, consequently, societal advancement. At the heart of this sector are teachers, whose effectiveness in imparting knowledge and skills to students is critical. Recent research underscores that teacher effectiveness is a primary predictor of student performance, highlighting the central role teachers play in the educational process (Darling-Hammond et al. 2020).

According to Kraft et al. (2014), the early years of a teaching career are particularly challenging and marked by a steep learning curve. Newly recruited educators must acclimate to their new working environments, manage classroom dynamics, and integrate their academic knowledge with practical teaching methods. During this period, they are expected to demonstrate resilience and flexibility to acquire the necessary knowledge and skills. Effective Teacher Induction Program (TIP) can play a vital role in easing this transition, thereby enhancing teacher retention rates and job satisfaction.

The Teacher Induction Program (TIP) is designed to provide wide-ranging support to new teachers, encompassing mentorship, professional development, and integration into the school's culture. These programs are vital for the professional growth and well-being of teachers. Again, according to Darling-Hammond et al. (2017), well-structured induction programs promote teacher retention, improve instructional practices, and enhance student achievement. They offer continuing support and professional development opportunities that are essential for new teachers' success.

The absence of adequate induction programs has been linked to a variety of poor consequences for new instructors. Once more, based on Kraft et al. (2014) new instructors who lack access to effective induction programs are more likely to report job unhappiness and greater turnover rates. Their findings suggest that a lack of structured support can lead to increased stress and burnout, harming teacher retention and the quality of education provided to pupils. This highlights the importance of well-designed induction programs that not only focus on skill acquisition but also promote a supportive environment and ongoing professional development (Peters-Burton et al., 2015).



Furthermore, Schmidt et al. (2017) found that comprehensive induction programs significantly improve teachers' perceptions of their efficacy, job satisfaction, and commitment to the profession. These programs help new teachers set clear professional goals, foster metacognitive strategies, and promote a culture of continuous reflection and development.

In response to the stated problem above, the researcher was challenged to know the significant relationship between a teacher induction program (TIP) and the teachers' goal attainment, metacognition, and well-being in the Schools Division Office of Calamba City. The main goal of this research study is to provide substantial insights and ideas for improving existing induction programs, thereby creating an environment of increased support and professional development opportunities for novice instructors. It also aims to identify particular areas within the current induction programs that require improvement and then offer techniques for optimizing their efficacy through a detailed analysis of the collected data and a meticulous review of the resulting findings.

1.1 Statement of the Problem

Specifically, the study aims to answer the following questions:

1. What is the level of Teacher Induction Program (TIP) in terms of School Dimension with regards to:
 - 1.1. Organization Structure; and
 - 1.2. Strategic Directions?
2. What is the level of Teacher Induction Program (TIP) in terms of Teaching process with regards to:
 - 2.1. Pedagogies for Inclusive Education;
 - 2.2. Differentiated Instruction;
 - 2.3. Adult Learning;
 - 2.4. Explicit Teaching; and
 - 2.5. 21st Century Teaching?
3. What is the level of Teacher Induction Program (TIP) in terms of Learning process with regards to:
 - 3.1. Understanding the Diversity of the Learners
 - 3.2. Learner-centered Learning;
 - 3.3. Assessment and Evaluation of Learning; and
 - 3.4. Diverse Learning Environments?
4. What is the level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to:
 - 4.1. Community Resources;
 - 4.2. School and Community Relationships; and
 - 4.3. Establish Linkages?
5. What is the level of Teachers' Goal Attainment in terms of:
 - 5.1. Vision;
 - 5.2. Goals;
 - 5.3. Motivations;
 - 5.4. Actions; and
 - 5.5. Self-regulations?
6. What is the level of Teachers' Metacognition in terms of:
 - 6.1. Knowledge;
 - 6.2. Experiences; and
 - 6.3. Strategies?
7. What is the level of Teachers' Well-being in terms of:

7.1. Physical;

7.2. Mental; and

7.3. Social?

8. Is there significant relationship between Teacher Induction Program (TIP) and Teachers' Goal Attainment?
9. Is there significant relationship between Teacher Induction Program (TIP) and Teachers' Metacognition?
10. Is there significant relationship between Teacher Induction Program (TIP) and Teachers' well-being?

2. METHODOLOGY

The research design utilized the descriptive survey method of research with a self-made questionnaire as the main data-gathering instrument. A descriptive survey study is a method of research that concerns itself with the present phenomena in terms of conditions, practices, beliefs, processes, relationships, or trends. It is concerned not only with the characteristics of individuals but with the characteristics of the whole sample thereof. It provides information useful to the solutions of local issues (problems).

3. RESULTS AND DISCUSSION

This chapter presented a detailed account of the presentation, analysis, and interpretation of the data that further discussed the relationship of the Teacher Induction Program (TIP) to the teachers' goal attainment, metacognition, and well-being in the Schools Division Office of Calamba City.

Level of Teacher Induction Program (TIP) in terms of School Dimension

The following data answers the statement of problem one (1) the level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Organization Structure and Strategic Directions.

The level of Teacher Induction Program (TIP) in terms of School Dimension with regards Organization Structure.

The statement, "Support teachers in creating a framework for what they want their students to learn and how they should go about doing so." yielded the highest mean score ($M=4.45$, $SD=0.56$) and was remarked as Always Observed. On the other hand, the statement "Assigning a specialized role for each member of the school to lead projects and activities." received the lowest mean score of responses with ($M=4.31$, $SD=0.76$) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Organization Structure attained a weighted mean score of 4.38 and a standard deviation of 0.50 and was Very Great Extent among the respondents.

Table 1 illustrates the level of Teacher Induction Program (TIP) in terms of School Dimension with regards Organization Structure.



Table 1.
Level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Organization Structure

STATEMENTS	MEAN	SD	REMARKS
Plan ahead of time which includes achievable objectives for each.	4.44	0.57	Always Observed
Implement efficient decision-making processes.	4.38	0.62	Always Observed
Assign a specialized role for each member of the school to lead projects and activities.	4.31	0.76	Always Observed
Balance authority and responsibility among staff.	4.33	0.70	Always Observed
Support teachers in creating a framework for what they want their students to learn and how they should go about doing so.	4.45	0.56	Always Observed
Weighted Mean	4.38		
SD	0.50		
Verbal Interpretation	Very Great Extent		

The assessment of the Teacher Induction Program (TIP) about the School Dimension with regards to Organization Structure reveals a consistent emphasis on supporting teachers in curriculum development and instructional planning. However, there is a perceived need for improvement in assigning specialized roles to school members for project leadership. Enhancing clarity and efficiency in organizational roles could optimize collaborative efforts within the school community, thus fostering a more cohesive and effective educational

environment.

The level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Strategic Directions.

Table 2 exemplifies the level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Strategic Directions.

Table 2.
Level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Strategic Directions

STATEMENTS	MEAN	SD	REMARKS
Apply the school's mission to its vision.	4.67	0.55	Always Observed
Improve the different aspects of the school through intentional goal-setting and initiative implementation.	4.47	0.59	Always Observed
Respond immediately according to the needs of the school.	4.55	0.63	Always Observed
Determine what is expected to be achieved in terms of student success objectives and overall organizational goals.	4.61	0.54	Always Observed
Ensure that relevant decisions are made by setting the organizational directions of the school.	4.58	0.58	Always Observed
Weighted Mean	4.58		
SD	0.46		
Verbal Interpretation	Very Great Extent		

The statement, "Applying the school's mission to its vision." produced the highest mean score (M=4.67, SD=0.55) and was said as Always Observed. On the other hand, the statement "Improving the different aspects of the school through intentional goal-setting and initiative implementation." conventional the lowest mean score of responses with (M=4.47, SD=0.59) yet was remarked Always Observed.

concerning to Strategic Directions underscores a consistent adherence to the school's mission and vision. However, there appears to be a need for enhancement in the area of setting intentional goals and implementing initiatives aimed at improving various aspects of the school. This indicates an opportunity for the induction program to further align strategic directions with actionable plans to drive holistic school development effectively.

The level of Teacher Induction Program (TIP) in terms of School Dimension with regards to Strategic Directions reached a weighted mean score of 4.58 and a standard deviation of 0.46 and was Very Great Extent among the respondents.

Level of Teacher Induction Program (TIP) in terms of Teaching Process

The following data answers the statement of problem one (2) the level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Pedagogies for Inclusive

The evaluation of the Teacher Induction Program (TIP)



Education, Differentiated Instruction, Adult Learning, Explicit Teaching, and 21st Century Teaching.
 The level of Teacher Induction Program (TIP) in terms of Teaching process with regards to Pedagogies for Inclusive Education.

Table 3 demonstrates the level of Teacher Induction Program (TIP) in terms of Teaching process with regards to Pedagogies for inclusive education.

Table 3.

Level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Pedagogies for inclusive education

STATEMENTS	MEAN	SD	REMARKS
Ensure that no children should be separated from main groups based on discrimination.	4.67	0.53	Always Observed
Plan appropriate activities and each student's personal needs taken into consideration.	4.59	0.57	Always Observed
Provide a student with a sense of belonging.	4.69	0.56	Always Observed
Offer an open and welcoming environment.	4.78	0.43	Always Observed
Encourage participation and active listening among all the students.	4.75	0.50	Always Observed
Weighted Mean	4.70		
SD	0.45		
Verbal Interpretation	Very Great Extent		

The statement, "Offer an open and welcoming environment." bore the highest mean score (M=4.78, SD=0.43) and was commented as Always Observed. On the other hand, the statement "Plan appropriate activities and each student's personal needs taken into consideration" established the lowest mean score of responses with (M=4.59, SD=0.57) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Teaching process with regards to Pedagogies for inclusive education achieved a weighted mean score of 4.70 and a standard deviation of 0.45 and was Very Great Extent among the respondents.

The assessment of the Teacher Induction Program (TIP) regarding Pedagogies for Inclusive Education highlights a strong emphasis on fostering an open and welcoming classroom environment. However, there is room for improvement in the implementation of personalized activities that address

individual student needs, indicating a need for further refinement of pedagogical approaches to ensure inclusivity and accommodate diverse learning requirements effectively. Moreover, the assessment of the teacher induction program regarding pedagogies for inclusive education emphasizes the importance of ongoing professional development and support for teachers to enhance their understanding and implementation of inclusive practices. This highlights the need for constant learning and improvement to ensure that teachers are equipped with the necessary skills and knowledge to create truly inclusive and equitable learning environments for all students.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Differentiated Instruction.

Table 4 shows the level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Differentiated Instruction.

Table 4.

Level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Differentiated Instruction

STATEMENTS	MEAN	SD	REMARKS
Provide a roadmap for all kinds of learners to receive education and gain knowledge, skills, and attitudes to become skilled citizens.	4.48	0.62	Always Observed
Use various kind of instructional materials that caters to multiple intelligences.	4.52	0.67	Always Observed
Focus on the life-long teaching process.	4.68	0.53	Always Observed
Engage diversity to create dynamic learning experiences.	4.60	0.61	Always Observed
Design activities and exercises that are appropriate for different kinds of learners.	4.54	0.62	Always Observed
Weighted Mean	4.56		
SD	0.53		
Verbal Interpretation	Very Great Extent		

The statement, "Focus on the life-long teaching process." generated the highest mean score (M=4.68, SD=0.53) and was stated as Always Observed. On the other hand, the statement

"Use various kind of instructional materials that caters to multiple intelligences" customary the lowest mean score of responses with (M=4.52, SD=0.67) yet was remarked Always



Observed.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Differentiated Instruction accomplished a weighted mean score of 4.56 and a standard deviation of 0.53 and was Very Great Extent among the respondents.

The evaluation of the Teacher Induction Program (TIP) regarding Differentiated Instruction underscores a consistent emphasis on the lifelong learning process. However, there is an

opportunity for enhancement in the utilization of diverse instructional materials tailored to accommodate various learning styles and intelligences, suggesting a need for further integration of differentiated instructional strategies into the program curriculum.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Adult Learning

Table 5 explains the level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Adult learning.

Table 5.

Level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Adult Learning

STATEMENTS	MEAN	SD	REMARKS
Use a variety of teaching activities and instructional materials.	4.66	0.49	Always Observed
Encourage brainstorming activities and participation among students.	4.63	0.55	Always Observed
Promote professionalism along with the teaching-learning processes.	4.70	0.48	Always Observed
Introduce the importance of career goals and life objectives.	4.63	0.53	Always Observed
Change the pace and the method frequently, especially when covering difficult and abstract topics.	4.52	0.59	Always Observed
Weighted Mean	4.63		
SD	0.43		
Verbal Interpretation	Very Great Extent		

The statement, “Promote professionalism along with the teaching-learning processes.” returned the highest mean score (M=4.70, SD=0.48) and was observed as Always Observed. On the other hand, the statement, “Change the pace and the method frequently, especially when covering difficult and abstract topics.” usually had the lowest mean score of responses with (M=4.52, SD=0.59) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Adult Learning got a weighted mean score of 4.63 and a standard deviation of 0.43 and was Very Great Extent among the respondents.

The evaluation of the Teacher Induction Program (TIP) concerning Adult Learning highlights the consistent application

of interactive methods, particularly in addressing challenging and abstract subjects, as an area of strength. However, there is room for improvement in diversifying instructional strategies to better accommodate the diverse learning styles and preferences of adult learners, suggesting a need for further emphasis on tailored approaches to adult education within the program curriculum.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Explicit teaching

Table 6 below illustrates the Level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Explicit teaching.

Table 6.

Level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Explicit teaching

STATEMENTS	MEAN	SD	REMARKS
Relate the old knowledge with the previous topics and lessons.	4.74	0.46	Always Observed
Present new material in short steps with lots of practice.	4.49	0.60	Always Observed
Guide students through shared practice and move students into a period of independent practice.	4.56	0.63	Always Observed
Adjust teaching strategies to fit both the students and the material.	4.65	0.56	Always Observed
Recognize that different students learn in different ways.	4.68	0.52	Always Observed
Weighted Mean	4.62		
SD	0.46		
Verbal Interpretation	Very Great Extent		



The statement, "Relate the old knowledge with the previous topics and lessons." yielded the highest mean score (M=4.74, SD=0.46) and was remarked as Always Observed. On the other hand, the statement "Present new material in short steps with lots of practice." received the lowest mean score of responses with (M=4.49, SD=0.60) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to Explicit Teaching attained a weighted mean score of 4.62 and a standard deviation of 0.46 and was Very Great Extent among the respondents.

The assessment of the Teacher Induction Program (TIP) regarding Explicit Teaching underscores the importance of

reinforcing connections between prior knowledge and current lessons, emphasizing consistency in instructional practices. However, it also suggests a potential area for improvement in presenting new material incrementally with ample practice opportunities, indicating a need for further focus on structured instructional approaches to enhance teaching effectiveness.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to 21st Century Teaching

Table 7 exemplifies the level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to 21st Century Teaching.

Table 7.

Level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to 21st Century teaching

STATEMENTS	MEAN	SD	REMARKS
Focus on project-based/outcome-based learning.	4.57	0.57	Always Observed
Encourage students to be creative throughout each lesson.	4.70	0.48	Always Observed
Embrace technology and utilize various online platforms in teaching.	4.63	0.55	Always Observed
Use social media and other social websites for the improvement of education.	4.52	0.60	Always Observed
Give positive feedback and constructive criticism frequently to ensure that students will recognize their strengths and weaknesses.	4.71	0.50	Always Observed
Weighted Mean	4.63		
SD	0.42		
Verbal Interpretation	Very Great Extent		

The statement, "Give positive feedback and constructive criticism frequently to ensure that students will recognize their strengths and weaknesses" produced the highest mean score (M=4.71, SD=0.50) and was said as Always Observed. On the other hand, the statement "Use social media and other social websites for the improvement of education" conventional the lowest mean score of responses with (M=4.52, SD=0.60) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Teaching Process with regards to 21st Century Teaching reached a weighted mean score of 4.63 and a standard deviation of 0.42 and was Very Great Extent among the respondents.

The evaluation of the Teacher Induction Program (TIP) regarding 21st Century Teaching practices highlights the significance of providing consistent feedback to students for their growth. However, it also underscores the need to further integrate modern technological tools and platforms into education, suggesting an opportunity for enhancement to better align with contemporary teaching methodologies and leverage

digital resources effectively. Additionally, the evaluation reveals the importance of fostering a collaborative and inquiry-based learning environment.

Level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Diversity of the Learners

The following data answers the statement of problem one (3) the level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Diversity of the Learners, Learner-centered Learning, Assessment and Evaluation of Learning, and Diverse Learning Environments.

The level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Diversity of the Learners.

Table 8 demonstrates the level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Diversity of the Learners.

Table 8.

Level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Diversity of the Learners

STATEMENTS	MEAN	SD	REMARKS
Put empathy and ensure that nobody will be left behind.	4.75	0.47	Always Observed
Understand the different capabilities of learners.	4.70	0.49	Always Observed
Recognize the multiple intelligences of the students.	4.69	0.48	Always Observed



Promote equality and avoid bias among the learners.	4.77	0.42	Always Observed
Give equal opportunities for all the learners.	4.79	0.41	Always Observed
Weighted Mean	4.74		
SD	0.38		
Verbal Interpretation	Very Great Extent		

The statement, “Give equal opportunities for all the learners.” bore the highest mean score (M=4.79, SD=0.41) and was commented as Always Observed. On the other hand, the statement “Recognize the multiple intelligences of the students.” established the lowest mean score of responses with (M=4.69, SD=0.48) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Diversity of the Learners achieved a weighted mean score of 4.74 and a standard deviation of 0.38 and was Very Great Extent among the respondents.

The high level of application of inclusive practices implies that teacher induction programs are effectively educating teachers to provide fair and supportive learning environments that meet the different needs of children. It also emphasizes the importance of providing equal opportunities to all students. However, it also indicates a need to further recognize and cater to the various intelligences of students, suggesting potential areas for enhancement to ensure a more inclusive and effective learning environment.

The level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Understanding the Learner-centered Learning

Table 9 shows the level of Teacher Induction Program (TIP) in terms of Learning process with regards to Learner-centered Learning.

The statement, “Create a positive and supportive learning classroom” generated the highest mean score (M=4.83, SD=0.42) and was stated as Always Observed. On the other hand, the statement “Allow the student to discover their learning through exploration.” customary the lowest mean score of responses with (M=4.67, SD=0.55) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Learner-centered Learning accomplished a weighted mean score of 4.75 and a standard deviation of 0.41 and was Very Great Extent among the respondents.

Table 9.

Level of Teacher Induction Program (TIP) in terms of Learning Process with regards Learner-centered Learning

STATEMENTS	MEAN	SD	REMARKS
Create a positive and supportive learning classroom.	4.83	0.42	Always Observed
Encourage student choice and voice.	4.70	0.54	Always Observed
Respect each student’s uniqueness.	4.80	0.40	Always Observed
Allow the student to discover their learning through exploration.	4.67	0.55	Always Observed
Increase and encourage cooperation not competition.	4.74	0.46	Always Observed
Weighted Mean	4.75		
SD	0.41		
Verbal Interpretation	Very Great Extent		

The evaluation of the Teacher Induction Program (TIP) regarding Learner-centered Learning highlights the importance of creating a positive and supportive classroom environment. It indicates that teachers routinely use project-based/outcome-based learning, promote creativity, embrace technology, use social media for instructional purposes, and provide constructive feedback to students. It suggests that the division's teacher induction programs effectively provide educators with the abilities they need to adapt to the changing educational landscape and address the diversified requirements of 21st century learners. However, it also recommends a need to further

emphasize student-centered approaches that foster exploration and discovery in the learning process, ensuring a more holistic educational experience for students.

The level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Assessment and Evaluation of Learning.

Table 10 explains the level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Assessment and Evaluation of Learning.



Table 10.

Level of Teacher Induction Program (TIP) in terms of Learning Process with regards Assessment and Evaluation of Learning

	MEAN	SD	REMARKS
Evaluate students learning using appropriate assessment materials.	4.71	0.49	Always Observed
Assess student’s capabilities through the use of various instructional materials.	4.69	0.51	Always Observed
Allow students to showcase their skills and abilities.	4.75	0.48	Always Observed
Rate students not only in academic performances but also includes all kinds of capacities.	4.67	0.52	Always Observed
Utilized assessment data to inform the modification of teaching and learning practices and programs.	4.69	0.50	Always Observed
Weighted Mean	4.70		
SD	0.41		
Verbal Interpretation	Very Great Extent		

The statement, “Allow students to showcase their skills and abilities” returned the highest mean score (M=4.75, SD=0.48) and was observed as Always Observed. On the other hand, the statement “Rate students not only in academic performances but also includes all kinds of capacities.” usually had the lowest mean score of responses with (M=4.67, SD=0.52) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Learning Process as to Assessment and Evaluation of Learning got a weighted mean score of 4.70 and a standard deviation of 0.41 and was Very Great Extent among the respondents.

The evaluation of the Teacher Induction Program (TIP) concerning Assessment and Evaluation of Learning underscores the importance of providing opportunities for

students to demonstrate their diverse skills and abilities. However, it also suggests the need for a comprehensive approach to assessment that goes beyond academic performance to encompass various capacities such as social-emotional skills, creativity, critical thinking, and problem-solving capabilities to ensure a holistic evaluation of student progress.

The level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Diverse Learning Environments.

Table 11 illustrates the Level of Teacher Induction Program (TIP) in terms of Learning Process with regards to Diverse Learning Environments.

Table 11.

Level of Teacher Induction Program (TIP) in terms of Learning Process with regards Diverse Learning Environments

STATEMENTS	MEAN	SD	REMARKS
Create a supportive and respectful environment.	4.79	0.41	Always Observed
Provide a conducive and healthy learning environment.	4.72	0.47	Always Observed
Provide other services such as other assistance through clinics, computer laboratories, and libraries.	4.58	0.60	Always Observed
Provide complete facilities for both academic and non-academic activities.	4.48	0.67	Always Observed
Improve the quality of the study environment in the school.	4.63	0.53	Always Observed
Weighted Mean	4.64		
SD	0.44		
Verbal Interpretation	Very Great Extent		

The statement, “Create a supportive and respectful environment.” yielded the highest mean score (M=4.79, SD=0.41) and was remarked as Always Observed. On the other hand, the statement “Provide complete facilities for both academic and non-academic activities.” received the lowest mean score of responses with (M=4.48, SD=0.67) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of Learning Process as to Diverse Learning Environments attained a weighted mean score of 4.64 and a standard deviation of 0.44 and was Very Great Extent among the respondents.

The assessment of the Teacher Induction Program (TIP) concerning Diverse Learning Environments highlights the importance of fostering a supportive and respectful atmosphere. However, it suggests the need for further attention to providing comprehensive facilities for both academic and non-academic activities to ensure an enriching educational experience for all students. By addressing the various needs and interests of students, educators can create an inclusive environment where every learner feels valued, supported, and empowered to thrive.



Level of Teacher Induction Program (TIP) in terms of School and Community Linkages

The following data answers the statement of problem one (4) the level of Teacher Induction Program (TIP) in terms of in terms of School and Community Linkages with regards to Community Resources, School and Community Relationships, and Establish Linkages.

The level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to Community Resources.

Table 12 exemplifies the Level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to Community Resources.

Table 12.

Level of Teacher Induction Program (TIP) in terms School and Community Linkages with regards to Community Resources

STATEMENTS	MEAN	SD	REMARKS
Engage the teachers and other staff with the community programs and activities.	4.49	0.58	Always Observed
Enhance engagement between the various stakeholders for student empowerment.	4.48	0.64	Always Observed
Establish good communication with the community to get support from the various social organizations.	4.50	0.60	Always Observed
Engage the students in community projects and activities.	4.45	0.65	Observed
Use community resources in education to develop a sense of value and belonging among students.	4.52	0.58	Always Observed
Weighted Mean	4.49		
SD	0.53		
Verbal Interpretation	Great Extent		

The statement, “Use community resources in education to develop a sense of value and belonging among students.” produced the highest mean score (M=4.52, SD=0.58) and was said as Always Observed. On the other hand, the statement “Engage the students in community projects and activities.” conventional the lowest mean score of responses with (M=4.45, SD=0.65) yet was remarked Always Observed.

of utilizing such resources to instill a sense of value and belonging among students. It indicates that teacher induction programs are effectively building school and community ties that support the holistic development of teachers and students. However, it emphasizes the importance of further engagement of students in community projects and activities to enhance their educational experience and strengthen ties with the broader community.

The level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to Community Resources reached a weighted mean score of 4.49 and a standard deviation of 0.53 and was Very Great Extent among the respondents.

The level of Teacher Induction Program (TIP) School and Community Linkages with regards to School and Community Relationships.

The evaluation of the Teacher Induction Program (TIP) regarding Community Resources underscores the recognition

Table 13 demonstrates the level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to School and Community Relationships.

Table 13.

Level of Teacher Induction Program (TIP) in terms School and Community Linkages with regards to School and Community Relationships

STATEMENTS	MEAN	SD	REMARKS
Proactive in knowing the community and establishing sustainable relationships.	4.43	0.67	Always Observed
Enhance learning opportunities by providing students with resources, experiences, and environments they would not otherwise have.	4.48	0.64	Always Observed
Create and foster an interest in the education of the community's citizens, both youth and adults.	4.48	0.71	Always Observed
Cultivate the positive impacts of community involvement for teachers and students.	4.56	0.63	Always Observed
Communicate with other community leaders that can help the school.	4.49	0.68	Observed
Weighted Mean	4.49		
SD	0.59		
Verbal Interpretation	Very Great Extent		



The statement, “Cultivate the positive impacts of community involvement for teachers and students.” bore the highest mean score (M=4.56, SD=0.63) and was commented as Always Observed. On the other hand, the statement “Proactive in knowing the community and establishing sustainable relationships.” established the lowest mean score of responses with (M=4.43, SD=0.67) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to School and Community Relationships achieved a weighted mean score of 4.49 and a standard deviation of 0.59 and was Very Great Extent among the respondents.

The assessment of the Teacher Induction Program (TIP) concerning School and Community Relationships highlights the acknowledgment of the positive influence of community involvement on both teachers and students. However, it underscores the need for teachers to be proactive in understanding and fostering sustainable relationships within the community to maximize the program's impact and ensure its long-term success.

The level of Teacher Induction Program (TIP) School and Community Linkages with regards to Establish Linkages.

Table 14 shows the level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to Establish Linkages.

Table 14

Level of Teacher Induction Program (TIP) in terms School and Community Linkages with regards to Establish linkages

STATEMENTS	MEAN	SD	REMARKS
Build an effective communication with stakeholders.	4.58	0.64	Always Observed
Build a good relationship with other people that can help the school progress.	4.63	0.58	Always Observed
Encourage stakeholders to support the school programs and activities.	4.60	0.59	Always Observed
Maintain the connection with the stakeholders and other organizations outside the school.	4.56	0.63	Always Observed
Extent and gain mutual understanding of the objectives and expectations of all parties.	4.52	0.60	Always Observed
Weighted Mean	4.58		
SD	0.55		
Verbal Interpretation	Very Great Extent		

The statement, “Build a good relationship with other people that can help the school progress.” generated the highest mean score (M=4.63, SD=0.58) and was stated as Always Observed. On the other hand, the statement “Extent and gain mutual understanding of the objectives and expectations of all parties.” is customary the lowest mean score of responses with (M=4.52, SD=0.60) yet was remarked Always Observed.

The level of Teacher Induction Program (TIP) in terms of School and Community Linkages with regards to Establish Linkages accomplished a weighted mean score of 4.58 and a standard deviation of 0.55 and was Very Great Extent among the respondents.

The evaluation of the Teacher Induction Program (TIP) regarding School and Community Linkages emphasizes the

significance of building strong relationships to advance the school's progress. It also underscores the need for mutual understanding among all involved parties to effectively align objectives and expectations, thereby enhancing the program's effectiveness and fostering collaborative partnerships.

Level of Teachers’ Goal Attainment

The following data answers the statement of problem one (5) the level of Teachers’ Goal Attainment with regards to Vision, Goals, Motivations, Actions, and Self Regulations.

The level of Teachers’ Goal attainment in terms of Vision. Table 15 below explains the level of teachers’ Goal attainment in terms of Vision.

Table 15.

Level of Teachers’ Goal attainment in terms of Vision

STATEMENTS	MEAN	SD	REMARKS
Demonstrate personal accountability and effective work habits	4.68	0.47	Always Observed
Make work productively with others.	4.62	0.58	Always Observed
Manage time and workload effectively.	4.56	0.59	Always Observed
Understand the impact of communication on professional image.	4.69	0.46	Always Observed
Show professionalism and positivity at work at all times.	4.67	0.55	Always Observed
Weighted Mean	4.64		
SD	0.45		
Verbal Interpretation	Very Great Extent		



The statement, “*Understand the impact of communication on professional image.*” returned the highest mean score (M=4.69, SD=0.46) and was observed as Always. On the other hand, the “*Manage time and workload effectively.*” usual the lowest mean score of responses with (M=4.56, SD=0.59) yet was remarked Always Observed.

The level of Teachers’ Goal attainment in terms of Vision got a weighted mean score of 4.64 and a standard deviation of 0.45 and was Very great Extent among the respondents.

The assessment of Teachers’ Goal Attainment in terms of Vision underscores the importance of effective communication in shaping their professional image. It highlights the need for educators to grasp the significance of communication in realizing their vision and emphasizes the importance of managing time and workload effectively to align with their overarching goals.

The level of Teachers’ Goal Attainment in terms of Goals. Table 16 illustrates the level of teachers’ Goal Attainment with regards to Goals.

Table 16.
Level of Teachers’ Goal attainment in terms of Goals

STATEMENTS	MEAN	SD	REMARKS
Improve own learning progress.	4.70	0.46	Always Observed
Continue professional growth and development.	4.71	0.47	Always Observed
Pursue continuing education through various practices.	4.63	0.53	Always Observed
Join trainings, workshops, and/or symposiums that can help grow and succeed.	4.67	0.50	Always Observed
Openness to learn new skills to help grow in teaching.	4.76	0.45	Always Observed
Weighted Mean	4.69		
SD	0.39		
Verbal Interpretation			Very Great Extent

The statement, “*Openness to learn new skills to help grow in teaching.*” yielded the highest mean score (M=4.76, SD=0.45) and was remarked as Always Observed. On the other hand, the statement “*Pursue continuing education through various practices.*” received the lowest mean score of responses with (M=4.63, SD=0.53) yet was remarked Always Observed.

The level of Teachers’ Goal Attainment in terms of Goals attained a weighted mean score of 4.69 and a standard deviation of 0.39 and was Very Great Extent among the respondents.

The evaluation of Teachers' Goal Attainment in terms of Goals underscores the significance of embracing a growth mindset in teaching. It highlights the importance of being open to learning

new skills and continuously seeking opportunities for professional development. Thus, it emphasizes the proactive approach educators take in setting and achieving their goals, ultimately contributing to their effectiveness in the classroom. Additionally, fostering a growth mindset among teachers not only enhances their personal and professional growth but also positively influences their students' learning experiences and outcomes.

The level of Teachers’ Goal Attainment in terms of Motivations.

Table 17 exemplifies the level of teachers’ Goal attainment in terms of Motivations.

Table 17.
Level of Teachers’ Goal attainment in terms of Motivations

STATEMENTS	MEAN	SD	REMARKS
Nurture greatness in teaching.	4.75	0.45	Always Observed
Develop intrinsic motivation among self.	4.66	0.52	Always Observed
Reflect on one’s practice and take the initiative to develop as a professional.	4.70	0.53	Always Observed
Recognize one’s teaching styles and practices that help develop motivations and interest in teaching.	4.67	0.49	Always Observed
Take every situation as part of a challenge and be positive at all times.	4.69	0.53	Always Observed
Weighted Mean	4.69		
SD	0.44		
Verbal Interpretation			Very Great Extent

The statement, “*Nurture greatness in teaching.*” produced the highest mean score (M=4.75, SD=0.45) and was said as Always Observed. On the other hand, “*Develop intrinsic motivation*

among self.” conventional the lowest mean score of responses with (M=4.66, SD=0.52) yet was remarked Always Observed.



The level of Teachers' Goal Attainment in terms of Motivations reached a weighted mean score of 4.69 and a standard deviation of 0.44 and was Very Great Extent among the respondents.

The assessment of Teachers' Goal Attainment in terms of Motivations reveals the significance of fostering a culture of excellence in teaching. It emphasizes the importance of nurturing intrinsic motivation among educators, highlighting their commitment to continuous improvement and dedication to their profession. This underscores the essential role of internal

drive and passion in achieving professional goals and ultimately enhancing teaching effectiveness. Furthermore, recognizing and supporting teachers' intrinsic motivations can lead to increased job satisfaction, reduced burnout, and a more resilient teaching workforce, further contributing to the overall quality of education.

The level of Teachers' Goal attainment in terms of Actions. Table 18 demonstrates the level of Teachers' Goal attainment in terms of Actions.

Table 18.
Level of Teachers' Goal attainment in terms of Actions

STATEMENTS	MEAN	SD	REMARKS
Extend effort along with the teaching and implementation of various activities that are beneficial to the students.	4.62	0.52	Always Observed
Improve your skills and abilities by exploring new methods and teaching techniques.	4.67	0.52	Always Observed
Explore new teaching methods that are appropriate for the new educational trends.	4.58	0.57	Always Observed
Give various opportunities and promote activities that can enhance one's ability.	4.60	0.54	Always Observed
Fill knowledge gaps by providing activities and performances that support collaborative learning.	4.63	0.52	Always Observed
Weighted Mean	4.62		
SD	0.47		
Verbal Interpretation	Very Great Extent		

The statement, "Improve your skills and abilities by exploring new methods and teaching techniques." bore the highest mean score (M=4.67, SD=0.52) and was commented as Always Observed. On the other hand, the statement "Explore new teaching methods that are appropriate for the new educational trends." established the lowest mean score of responses with (M=4.58, SD=0.57) yet was remarked Always Observed.

The level of Teachers' Goal attainment in terms of Actions achieved a weighted mean score of 4.62 and a standard deviation of 0.47 and was Very Great Extent among the respondents.

The assessments on teachers' Goal attainment in terms of Actions across various dimensions underscores the multifaceted nature of effective teaching. It highlights the

importance of teachers' well-being, both physical and mental, in fostering a conducive learning environment. Moreover, it emphasizes the critical role of metacognitive strategies, such as knowledge building and self-awareness, in promoting student engagement and academic success. Furthermore, the evaluation of goal attainment actions emphasizes the necessity for continuous professional development and adaptability to evolving educational trends. Overall, these findings underscore the holistic approach required to enhance teacher effectiveness, encompassing personal well-being, pedagogical skills, and professional growth.

The Level of Teachers' Goal attainment in terms of Self-regulations Table 19 shows the level of teachers' Goal attainment in terms of Self-regulation.

Table 19.
Level of Teachers' Goal attainment in terms of Self-Regulations

STATEMENTS	MEAN	SD	REMARKS
Aware of own feelings and emotions.	4.71	0.47	Always Observed
Know how to positively manage consequences and failures.	4.69	0.51	Always Observed
Reduce disruptive problems that may affect learning stability.	4.60	0.55	Always Observed
Manage time effectively and regulate own school work, performance tasks, and activities.	4.58	0.58	Always Observed
Find time to enhance one's learning skills and abilities.	4.68	0.52	Always Observed
Weighted Mean	4.65		
SD	0.43		
Verbal Interpretation	Very Great Extent		



The statement, “*Awareness of own feelings and emotions.*” generated the highest mean score (M=4.71, SD=0.47) and was stated as Always Observed. On the other hand, the statement “*Manage time effectively and regulate own school work, performance tasks, and activities.*” customary the lowest mean score of responses with (M=4.58, SD=0.58) yet was remarked Always Observed.

The level of Teachers’ Goal Attainment in terms of Self-regulations accomplished a weighted mean score of 4.65 and a standard deviation of 0.43 and was Very Great Extent among the respondents.

The evaluation of Teachers' Goal Attainment, particularly regarding Self-regulation, underscores the significance of being aware of one's own feelings and emotions, as indicated by the highest mean score. However, the lower mean score for effectively managing time and regulating school work, performance tasks, and activities suggests an area for

improvement in teachers' organizational skills and time management strategies. Nonetheless, the consistently high weighted mean score and frequent observation of teachers' effectiveness in self-regulation underscore the critical role of self-awareness and self-management in achieving professional goals and enhancing overall teacher effectiveness in the educational setting. It also implies that the division's teacher induction programs are effectively educating educators with the skills needed to negotiate the difficulties of the teaching profession while also maintaining their well-being.

Level of Teachers’ Metacognition

The following data answers the statement of problem one (5) the level of Teacher’s Metacognition in terms of Knowledge, Experiences, and Strategies.

The Level of Teachers’ Metacognition in terms of Knowledge Table 20 explains the level of teachers’ Metacognition in terms of Knowledge.

Table 20.
Level of Teachers’ Metacognition in terms of Knowledge

STATEMENTS	MEAN	SD	REMARKS
Have a deep knowledge of the subject they are teaching.	4.69	0.50	Always Observed
Clarify the information that students are seeking.	4.71	0.49	Always Observed
Understand the topics clearly and flexibly.	4.73	0.46	Always Observed
Plan and teach the lesson by way of highlighting the main points of the lesson to the learner.	4.75	0.47	Always Observed
Build concepts upon prior knowledge of the students and give additional information about these.	4.76	0.47	Always Observed
Weighted Mean	4.73		
SD	0.40		
Verbal Interpretation	Very Great Extent		

The statement, “*Build concepts upon prior knowledge of the students and give additional information about these.*” returned the highest mean score (M=4.76, SD=0.47) and was observed as Always Observed. On the other hand, the statement “*Have a deep knowledge of the subject they are teaching.*” usually had the lowest mean score of responses with (M=4.69, SD=0.50) yet was remarked Always Observed.

The level of Teachers’ Metacognition in terms of Knowledge got a weighted mean score of 4.73 and a standard deviation of 0.40 and was Very Great Extent among the respondents.

The assessment of Teachers' Metacognition, particularly regarding knowledge, emphasizes the importance of building upon students' prior knowledge and providing additional information, as indicated by the highest mean score. Teachers strongly agree with statements about having a thorough understanding of the subject matter, clarifying information for students, understanding issues clearly and flexibly, organizing and teaching lessons successfully, and building on students' past knowledge. However, the lower mean score for having a deep knowledge of the subject they teach suggests a potential area for improvement in teachers' content expertise. Nonetheless, the consistently high weighted mean score and frequent observation of teachers' effectiveness in metacognitive knowledge underscore the critical role of building upon students' existing understanding to foster deeper learning and enhance teacher effectiveness in facilitating student growth and understanding. It also suggests that teacher induction programs within the division are effective in providing educators with the skills needed to engage in reflective teaching methods and improve student learning.

The level of Teachers’ Metacognition in terms of Experiences Table 21 illustrates the level of Teachers’ Metacognition in terms of Experiences.



Table 21.
Level of Teachers’ Metacognition in terms of Experiences

STATEMENTS	MEAN	SD	REMARKS
Communicate proactively with other people, especially with the learners.	4.66	0.51	Always Observed
Provide regular feedback and reward the good work of the students.	4.55	0.57	Always Observed
Initiate collaboration among other people in a work setting.	4.60	0.58	Always Observed
Offer flexibility and adaptability for any other kind of work-related situations.	4.65	0.53	Always Observed
Plan and implement realistic activities that could help students develop their skills and abilities.	4.68	0.50	Always Observed
Weighted Mean	4.63		
SD	0.45		
Verbal Interpretation	Very Great Extent		

The statement, “Plan and implementing realistic activities that could help students develop their skills and abilities” yielded the highest mean score (M=4.68, SD=0.50) and was remarked as Always Observed. On the other hand, the statement “Provide regular feedback and reward the good work of the students.” received the lowest mean score of responses with (M=4.55, SD=0.57) yet was remarked Always Observed.

The evaluation of Teachers' Metacognition, specifically about Experiences, highlights the importance of planning and implementing realistic activities to facilitate student skill and ability development, as indicated by the highest mean score.

However, the lower mean score for providing regular feedback and rewarding students' good work suggests an area for improvement in recognizing and reinforcing positive learning behaviors. Nevertheless, the consistently high weighted mean score and frequent observation of teachers' effectiveness in metacognitive experience underscore the critical role of well-planned and implemented activities in promoting student growth and teacher effectiveness in the educational setting.

The level of Teachers’ Metacognition in terms of Strategies. Table 22 exemplifies the level of teachers’ Metacognition in terms of Strategies.

Table 22.
Level of Teachers’ Metacognition in terms of Strategies

STATEMENTS	MEAN	SD	REMARKS
Give learners ample time to understand the material and ask questions.	4.70	0.51	Always Observed
Encourage students to share reflect on and challenge ideas to develop and advance their understanding.	4.69	0.54	Always Observed
Provide activities that help students control their learning process.	4.68	0.53	Always Observed
Provide resources and support for the learners.	4.71	0.52	Always Observed
Monitor students’ learning progress.	4.77	0.48	Always Observed
Weighted Mean	4.71		
SD	0.45		
Verbal Interpretation	Very Great Extent		

The statement, “Monitor students’ learning progress.” produced the highest mean score (M=4.77, SD=0.48) and was said as Always Observed. On the other hand, the statement “Provide activities that help students control their learning process.” conventional the lowest mean score of responses with (M=4.68, SD=0.53) yet was remarked Always Observed.

The level of Teachers’ Metacognition in terms of Strategies. reached a weighted mean score of 4.71 and a standard deviation of 0.45 and was Very Great Extent among the respondents.

The evaluation of Teachers' Metacognition, specifically in implementing strategies, underscores the significance of monitoring students' learning progress, as indicated by the

highest mean score. However, the lower mean score for providing activities that help students control their learning process suggests an area for improvement in empowering students' autonomy in their learning journey. Nevertheless, the consistently high weighted mean score and frequent observation of teachers' effectiveness in metacognitive strategies highlight the crucial role of fostering students' self-awareness and self-regulation skills in enhancing overall learning outcomes and teacher effectiveness.

Level of Teachers’ Well-being

The following data answers the statement of problem one (6) the level of Teacher’s Well-being in terms of Physical, Mental, and Social.



The level of Teachers' Well-being in terms of Physical

Table 23.
Level of Teachers' Well-being in terms of Physical

STATEMENTS	MEAN	SD	REMARKS
Prioritize health and physical attributes more than anything.	4.54	0.59	Always Observed
Understand the importance of doing physical activities which may help the total improvement of own's personality.	4.55	0.57	Always Observed
Aware of building healthy habits.	4.48	0.59	Always Observed
Practice healthy routines including relaxation, correct sleep hygiene, healthy diet, etc.	4.39	0.68	Always Observed
Teach the students good healthy habits and physical routines that can benefit them.	4.60	0.57	Always Observed
Weighted Mean	4.51		
SD	0.50		
Verbal Interpretation	Very Great Extent		

The statement, "Teaching the students good healthy habits and physical routines that can benefit them." bore the highest mean score (M=4.60, SD=0.57) and was commented as Always Observed. On the other hand, the statement "Practice healthy routines including relaxation, correct sleep hygiene, healthy diet, etc." established the lowest mean score of responses with (M=4.39, SD=0.68) yet was remarked Always Observed.

The level of Teachers' Well-being in terms of Physical achieved a weighted mean score of 4.51 and a standard deviation of 0.50 and was Very Great Extent among the respondents.

The assessment of Teachers' Well-being in terms of Physical highlights the importance of teaching students healthy habits and physical routines, as indicated by the highest mean score. However, the lower mean score for practicing healthy routines, including relaxation techniques, proper sleep hygiene, and a healthy diet, suggests an area for improvement in teachers' self-

care practices. Nevertheless, the consistently high weighted mean score and frequent observation of teachers' effectiveness in physical well-being underscore the critical role of promoting healthy habits in both students and teachers for fostering overall well-being and effectiveness in the educational setting.

Johnson et al. (2018) researched the association between workload, stress, and teacher physical well-being. In their study, they found that instructors with a high workload and job-related stress are more likely to experience physical health issues such as exhaustion, musculoskeletal ailments, and reduced immunological function. To improve teachers' physical well-being, strategies for reducing workload and managing stress were suggested.

The level of Teachers' Well-being in terms of Mental Table 24 shows the level of teachers' Well-being in terms of Mental.

Table 24.
Level of Teachers' Well-being in terms of Mental

STATEMENTS	MEAN	SD	REMARKS
Pay attention to the present situation and be mindful of every action taken.	4.70	0.49	Always Observed
Practice positive affirmations and do not entertain negative thoughts.	4.56	0.54	Always Observed
Concentrate and focus on the target goals despite destruction in the surroundings.	4.79	0.49	Always Observed
Regulate own emotions to effectively facilitate job-related tasks.	4.54	0.60	Always Observed
Notice your own emotions and reduce triggering factors.	4.52	0.58	Always Observed
Weighted Mean	4.66		
SD	0.36		
Verbal Interpretation	Very Great Extent		

The statement, "Concentrate and focus on the target goals despite destruction in the surroundings." generated the highest mean score (M=4.79, SD=0.49) and was stated as Always Observed. On the other hand, the statement "Notice your own

emotions and reduce triggering factors customary." had the lowest mean score of responses with (M=4.52, SD=0.58) yet was remarked Always Observed.



The level of Teachers' Well-being in terms of Mental accomplished a weighted mean score of 4.66 and a standard deviation of 0.36 and was Very Great Extent among the respondents.

The evaluation of Teachers' Well-being in Mental highlights the importance of maintaining focus on target goals despite distractions, as indicated by the highest mean score. However, the lower mean score for noticing one's own emotions and reducing triggering factors suggests an area for improvement in

self-awareness and stress management strategies. Nevertheless, the consistently high weighted mean score and the frequent observation of teachers' effectiveness in mental well-being emphasize the crucial role of mental resilience in fostering overall teacher effectiveness and well-being.

The level of Teachers' Well-being in terms of Social. Table 25 explains the level of teachers' Well-being in terms of Social.

Table 25.
Level of Teachers' Well-being in terms of Social

STATEMENTS	MEAN	SD	REMARKS
Communicate and socialize effectively with the learners and students.	4.64	0.53	Always Observed
Secure relationships with the learners and student-athletes.	4.52	0.55	Always Observed
Develop effective personal skills, such as problem-solving and social skills towards an effective learning environment.	4.58	0.56	Always Observed
Recognize and manage feelings effectively.	4.61	0.55	Always Observed
Build good relationships with other people in the community.	4.65	0.51	Always Observed
Weighted Mean		4.60	
SD		0.45	
Verbal Interpretation			<i>Very Great Extent</i>

The statement, "Build good relationships with other people in the community." returned the highest mean score (M=4.64, SD=0.53) and was observed as Always Observed. On the other hand, the statement "Secure relationships with the learners and student-athletes." usually had the lowest mean score of responses with (M=4.52, SD=0.55) yet was remarked Always Observed.

The level of Teachers' Well-being in terms of Social got a weighted mean score of 4.60 and a standard deviation of 0.45 and was Very Great Extent among the respondents.

The evaluation of Teachers' Well-being in terms of Social underscores the significance of building strong relationships with community members, as indicated by the highest mean score. However, the lower mean score for securing relationships with learners and student-athletes suggests potential areas for improvement in fostering connections within the school environment. Overall, the high weighted mean score and consistent observation of teachers' effectiveness in social well-being highlight the importance of cultivating positive social interactions for enhancing overall teacher effectiveness and well-being.

Significant Relationship between Teachers Induction Program (TIP) and Teachers' Goal Attainment

It is essential to successfully incorporate newly qualified teachers into the education system to help them grow professionally and improve student results. Teacher Induction

Program (TIP) plays a vital role in this process by assisting novice educators as they start their teaching careers. Evaluating the effectiveness of these programs in supporting teachers' development and success hinges on understanding how TIP participation impacts teachers' goal achievement.

The Significant Relationship between Teachers Induction Program (TIP) and Teachers' Goal Attainment.

The computed r values obtained from the tests indicated varying degrees of relationship strength, ranging from very weak to strong moderate relationships. Moreover, the obtained p-values were less than the significance alpha level of 0.05, indicating a statistically significant relationship between Teacher Induction Program (TIP) and Teachers' Goal Attainment.

The results of the study support the rejection of the null hypothesis, which states that there is no significant relationship between Teacher Induction Program (TIP) and Teachers' Goal Attainment. Instead, the alternative hypothesis, which posits a significant relationship between the two, is accepted based on the findings. Moreover, it emphasizes the importance of allocating resources and attention to the development and execution of robust induction programs for teachers, thereby facilitating their journey toward fulfilling their professional objectives.

Table 26 presents the significant relationship between Teacher Induction Program (TIP) and teachers' goal attainment.



Table 26.
Relationship between Teachers Induction Program (TIP) and Teacher's Goal Attainment

		V	G	G	A	SR
OS	Pearson Correlation	0.345**	0.279**	0.322**	0.456**	0.338**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	200	200	200	200	200
SD	Pearson Correlation	0.335**	0.393**	0.379**	0.475**	0.346**
	Sig. (2-tailed)	0.008	0.000	0.002	0.022	0.008
	N	200	200	200	200	200
PIE	Pearson Correlation	0.345**	0.483	0.452**	0.503**	0.376**
	Sig. (2-tailed)	0.023	0.219	0.037	0.001	0.014
	N	200	200	200	200	200
DI	Pearson Correlation	0.42	0.402**	0.406**	0.599	0.425
	Sig. (2-tailed)	0.056	0.002	0.024	0.129	0.062
	N	200	200	200	200	200
AL	Pearson Correlation	0.394	0.421**	0.423	0.56	0.424
	Sig. (2-tailed)	0.471	0.035	0.254	0.947	0.507
	N	200	200	200	200	200
ET	Pearson Correlation	0.348	0.416	0.402	0.499	0.346
	Sig. (2-tailed)	0.616	0.058	0.357	0.875	0.67
	N	200	200	200	200	200
2CT	Pearson Correlation	0.364	0.441**	0.502	0.538	0.358
	Sig. (2-tailed)	0.42	0.021	0.175	0.868	0.464
	N	200	200	200	200	200
UDL	Pearson Correlation	0.425**	0.561**	0.511**	0.397**	0.359**
	Sig. (2-tailed)	0.001	0.023	0.002	0.000	0.001
	N	200	200	200	200	200
LCL	Pearson Correlation	0.527**	0.541**	0.523**	0.569**	0.527**
	Sig. (2-tailed)	0.000	0.043	0.004	0.000	0.000
	N	200	200	200	200	200
AEL	Pearson Correlation	0.428	0.529	0.617	0.508**	0.455
	Sig. (2-tailed)	0.18	1	0.253	0.03	0.134
	N	200	200	200	200	200
DLE	Pearson Correlation	0.48	0.568**	0.569	0.599	0.507
	Sig. (2-tailed)	0.21	0.003	0.066	0.535	0.224
	N	200	200	200	200	200
CR	Pearson Correlation	0.471**	0.442**	0.433**	0.56**	0.489**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	200	200	200	200	200
SCR	Pearson Correlation	0.569**	0.441**	0.497**	0.569**	0.542**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	200	200	200	200	200
EL	Pearson Correlation	0.562	0.421**	0.474**	0.528	0.454
	Sig. (2-tailed)	0.05	0.003	0.03	0.235	0.091
	N	200	200	200	200	200

The significant relationship between Teacher Induction Program (TIP) and Teachers' Goal Attainment, highlights the importance of comprehensive and holistic induction programs. The TIP covers several dimensions, including the school dimension, teaching process, learning process, and school-community linkages, each playing a crucial role in influencing teachers' vision, goals, motivations, actions, and self-regulation. Specifically, the school dimension within TIP significantly impacts teachers' goal attainment through factors like organizational structure and strategic directions. The teaching process, which includes inclusive education, differentiated instruction, adult learning, explicit teaching, and 21st-century teaching, is also significantly related to teachers'

goal attainment. Additionally, the learning process, which involves understanding learner diversity, learner-centered learning, assessment and evaluation, and diverse learning environments, shows a significant relationship with goal attainment. School and community linkages, including community resources and positive relationships, further support teachers in achieving their goals.

The results of the findings imply the importance of investing in comprehensive induction programs to help new teachers achieve their professional goals. This investment can lead to increased teacher satisfaction, retention, and effectiveness. Secondly, the positive impact on goal attainment suggests that



well-designed TIPs can develop a more skilled and confident teaching workforce, ultimately benefiting student learning outcomes and overall educational quality. Lastly, it stresses the need for educational policymakers and administrators to prioritize and continuously improve TIPs to ensure they meet the evolving needs of teachers.

Significant Relationship between Teachers Induction Program (TIP) and Teachers’ Metacognition

Understanding the complex relationship between Teacher Induction Programs (TIPs) and teachers' metacognitive development has important implications for education. Metacognition, which involves being aware of and regulating one's cognitive processes, is crucial for effective teaching and student learning. Therefore, it is essential to investigate the connection between TIP participation and teachers' metacognition to understand how these programs can impact educators' reflective practices and instructional effectiveness.

The Significant Relationship between Teachers Induction

Program (TIP) and Teachers’ Metacognition.

The computed r values obtained from the tests indicated varying degrees of relationship strength, ranging from very weak to strong moderate relationships. Moreover, the obtained p-values were less than the significance alpha level of 0.05, indicating a statistically significant relationship between teachers' induction programs and teachers’ metacognition.

The results of the study support the rejection of the null hypothesis, which states that there is no significant relationship between teachers' induction programs and teachers’ metacognition. Instead, the alternative hypothesis, which posits a significant relationship between the two, is accepted based on the findings. This implies that investing in comprehensive induction programs for teachers’ metacognition can have a positive impact on their metacognitive skills.

Table 27 presents the Significant Relationship between Teacher Induction Program (TIP) and Teachers’ Metacognition.

Table 27.
Significant Relationship between Teachers Induction Program (TIP) and Teacher’s Metacognition

		K	E	S
OS	Pearson Correlation	0.372**	0.474**	0.323**
	Sig. (2-tailed)	0.000	0.000	0.000
	N	200	200	200
SD	Pearson Correlation	0.323**	0.423	0.441**
	Sig. (2-tailed)	0.000	0.052	0.000
	N	200	200	200
PIE	Pearson Correlation	0.397	0.456**	0.415**
	Sig. (2-tailed)	0.505	0.000	0.07
	N	200	200	200
DI	Pearson Correlation	0.464**	0.571	0.461**
	Sig. (2-tailed)	0.000	0.234	0.011
	N	200	200	200
AL	Pearson Correlation	0.475**	0.542	0.505
	Sig. (2-tailed)	0.008	0.817	0.153
	N	200	200	200
ET	Pearson Correlation	0.354**	0.435	0.494
	Sig. (2-tailed)	0.029	0.676	0.231
	N	200	200	200
2CT	Pearson Correlation	0.424**	0.5	0.527
	Sig. (2-tailed)	0.008	0.897	0.111
	N	200	200	200
UDL	Pearson Correlation	0.383	0.412**	0.39**
	Sig. (2-tailed)	0.156	0.000	0.011
	N	200	200	200
LCL	Pearson Correlation	0.508	0.521**	0.554**
	Sig. (2-tailed)	0.159	0.000	0.006
	N	200	200	200
AEL	Pearson Correlation	0.51	0.543**	0.518
	Sig. (2-tailed)	0.612	0.01	0.426
	N	200	200	200
DLE	Pearson Correlation	0.434**	0.534	0.554**
	Sig. (2-tailed)	0.003	0.771	0.045
	N	200	200	200
CR	Pearson Correlation	0.41**	0.529**	0.48**
	Sig. (2-tailed)	0.000	0.000	0.000



	N	200	200	200
SCR	Pearson Correlation	0.507**	0.593**	0.424**
	Sig. (2-tailed)	0.000	0.000	0.000
	N	200	200	200
EL	Pearson Correlation	0.416**	0.483	0.317**
	Sig. (2-tailed)	0.000	0.375	0.039
	N	200	200	200

The research findings indicate a significant relationship between Teacher Induction Programs (TIP) and teachers' metacognition. The TIP encompasses several dimensions, including the school dimension, teaching process, learning process, and school-community linkages. Each of these dimensions plays a crucial role in enhancing teachers' metacognitive abilities regarding knowledge, experiences, and strategies. In terms of the school dimension, the study found that organizational structure and strategic directions within the TIP significantly influence teachers' metacognition. Factors such as clear vision, well-defined goals, and strategic actions contribute positively to teachers' metacognitive development. Similarly, the teaching process, which includes pedagogies for inclusive education, differentiated instruction, adult learning, explicit teaching, and 21st-century teaching, also shows a significant relationship with teachers' metacognition. These methods help teachers develop better strategies, enhance base knowledge, and effectively reflect on their teaching practices. Furthermore, the learning process within the TIP, which includes understanding learner diversity, implementing learner-centered learning, assessing and evaluating learning, and fostering diverse learning environments, is significantly related to teachers' metacognition. Lastly, school and community linkages, such as community resources, strong school-community relationships, and well-established partnerships, are found to significantly support teachers' metacognitive growth.

Based on the findings, the Teacher Induction Programs (TIPs) have the potential to positively influence teachers' metacognition. This suggests that by implementing structured induction programs, teachers can enhance their self-awareness, reflective thinking, and strategic planning skills, which are all important aspects of metacognition. Educational institutions can leverage this connection to develop more impactful

induction programs that not only enhance teaching abilities and job retention but also promote deeper cognitive engagement and professional development for teachers.

Significant Relationship between Teachers Induction Program (TIP) and Teachers' Well-being

It is crucial to recognize the connection between Teacher Induction Programs (TIPs) and teachers' well-being in today's educational discussions, as teachers' overall well-being affects both their satisfaction and the quality of education they deliver. Exploring the correlation between TIP participation and teachers' well-being is vital to understanding how effective these programs are in promoting educators' holistic growth.

Significant Relationship between Teachers Induction Program (TIP) and Teachers' Well-being.

The computed r values obtained from the tests indicated varying degrees of relationship strength, ranging from very weak to strong moderate relationships. Moreover, the obtained p-values were less than the significance alpha level of 0.05, indicating a statistically significant relationship between teachers' induction programs and teachers' well-being.

The results of the study support the rejection of the null hypothesis, which states that there is no significant relationship between teachers' induction programs and teachers' well-being. Instead, the alternative hypothesis, which posits a significant relationship between the two, is accepted based on the findings. This implies that investing in comprehensive induction programs for teachers' well-being can have a positive impact on their metacognitive skills.

Table 28 presents the Significant Relationship between Teacher induction program (TIP) and Teachers' Well-being.

Table 28.
Significant Relationship between Teachers Induction Program (TIP) and Teacher's Well-being

		P	M	S
OS	Pearson Correlation	0.149**	0.317**	0.352**
	Sig. (2-tailed)	0.014	0.000	0.000
	N	200	200	200
SD	Pearson Correlation	0.346	0.398**	0.45
	Sig. (2-tailed)	0.366	0.003	0.077
	N	200	200	200
PIE	Pearson Correlation	0.241**	0.356**	0.385**
	Sig. (2-tailed)	0.000	0.017	0.000
	N	200	200	200
DI	Pearson Correlation	0.289	0.409**	0.437
	Sig. (2-tailed)	0.113	0.045	0.403
	N	200	200	200
AL	Pearson Correlation	0.247**	0.401	0.36
	Sig. (2-tailed)	0.007	0.425	0.698



	N	200	200	200
ET	Pearson Correlation	0.169**	0.317	0.387
	Sig. (2-tailed)	0.006	0.584	0.552
	N	200	200	200
2CT	Pearson Correlation	0.362**	0.414	0.42
	Sig. (2-tailed)	0.004	0.356	0.744
	N	200	200	200
UDL	Pearson Correlation	0.185**	0.343**	0.429**
	Sig. (2-tailed)	0.000	0.001	0.000
	N	200	200	200
LCL	Pearson Correlation	0.282**	0.388**	0.44**
	Sig. (2-tailed)	0.000	0.002	0.000
	N	200	200	200
AEL	Pearson Correlation	0.333**	0.441	0.483**
	Sig. (2-tailed)	0.000	0.158	0.009
	N	200	200	200
DLE	Pearson Correlation	0.346**	0.415	0.459
	Sig. (2-tailed)	0.015	0.202	0.953
	N	200	200	200
CR	Pearson Correlation	0.402	0.417**	0.453**
	Sig. (2-tailed)	0.283	0.000	0.000
	N	200	200	200
SCR	Pearson Correlation	0.411	0.494**	0.445**
	Sig. (2-tailed)	0.217	0.000	0.000
	N	200	200	200
EL	Pearson Correlation	0.373	0.493	0.485
	Sig. (2-tailed)	0.072	0.055	0.495
	N	200	200	200

The research findings reveal a substantive correlation between the Teacher Induction Program (TIP) and the multifaceted well-being of teachers, encompassing physical, mental, and social dimensions. The TIP is structured around four key components: the school dimension, the teaching process, the learning process, and school-community linkages. Within the school dimension, the study identified that the organizational structure and strategic directions of the institution are significantly linked to the well-being of teachers, touching on physical, mental, and social aspects. This suggests that the way a school is organized and the direction it is heading play a crucial role in the overall health and satisfaction of its educators. The teaching process, which integrates pedagogies for inclusive education, differentiated instruction, adult learning, explicit teaching, and 21st-century skills, also showed a significant positive relationship with the well-being of teachers. This indicates that engaging teaching methodologies that cater to diverse learning needs can contribute to a teacher's sense of competence and satisfaction, thereby enhancing their overall well-being. Moreover, the learning process, which includes the understanding of learner diversity, the implementation of learner-centered strategies, the assessment and evaluation of learning, and the creation of diverse learning environments, was found to significantly impact the physical, mental, and social well-being of teachers. This underscores the importance of a supportive learning environment that recognizes and addresses the varied needs of students, which in turn reflects positively on teacher well-being. Finally, the aspect of school and community linkages, which involves the use of community resources, the fostering of school-community relationships, and the integration of these linkages into the teachers' induction

programs, was significantly associated with the well-being of teachers.

The implications of the study on the relationship between Teacher Induction Program (TIP) participation and teachers' well-being are wide-ranging. Firstly, it emphasizes the importance of structured induction programs in supporting educators' mental health. Secondly, it indicates the need for increased investment in effective TIPs to benefit both individual teachers and the education system as a whole. Thirdly, improving teachers' well-being through TIPs could have a positive impact on retention rates and job satisfaction, promoting stability in schools and districts. Additionally, it calls for a comprehensive approach to teacher support by integrating well-being components into TIPs. Lastly, policymakers may need to reassess education policies and TIP frameworks to prioritize teacher well-being, fostering a healthier and more resilient teaching workforce.

4. CONCLUSION AND RECOMMENDATIONS

The findings led to the following conclusions: First, concerning the correlation between Teacher Induction Program (TIP) and teachers' metacognition, the null hypothesis states, "There is no significant relationship between Teacher Induction Program (TIP) and teachers' goal-attainment" is rejected. This indicates that focusing on all key areas of TIP can better support newly hired teachers in their professional development in terms of goal attainment concerning vision, goals, motivations, actions, and self-regulation.



Second, regarding the relationship between Teacher Induction Program (TIP) and teachers' metacognition, the null hypothesis states, "There is no significant relationship between Teacher Induction Program (TIP) and teachers' metacognition" is rejected. This implies that investing in comprehensive induction programs for novice teachers can have a positive impact on their metacognitive skills in terms of knowledge, experiences, and strategies.

Lastly, linking to the relationship between Teacher Induction Program (TIP) and teachers' well-being, the null hypothesis states, "There is no significant relationship between Teacher Induction Program (TIP) and teachers' well-being" is rejected. This means that the Teacher Induction Program is not only focused on professional development but also on the well-being of teachers which promotes the overall well-being of educators.

Based on the drawn conclusions, the following recommendations are:

1. Newly hired teachers may actively participate in these programs under the teacher induction program (TIP) to enhance their teaching abilities and build good rapport with others.
2. Mentor teachers may continue supporting new teachers through the teacher induction program by providing guidance and sharing their expertise.
3. School administrators may continue supporting and investing in teacher induction programs. They should also consider the findings of this study when developing strategic directions and organizational structures.

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KALISAFI (KAGAMITANG LIKHA SA FILIPINO): BILANG BATAYAN SA PAGPAPAUNLAD NG MASINING NA PAGPAPAHAYAG AT PAGPAPALAWAK NG BOKABULARYO SA PERFORMANS NG MGA MAG-AARAL

Ace Oliveros Flores

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pag-aaral na ito ay naglalayong malaman ang kamalayan sa paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang batayan sa pagpapaunlad ng masining na pagpapahayag at pagpapalawak ng bokabularyo ng mga mag-aaral. Layon din ng pag-aaral na ito na matukoy ang resulta ng pagganap ng mga mag-aaral sa pagsulat ng tula at malaman kung may makabuluhang epekto ang paggamit ng KALISAFI (Kagamitang Likha sa Filipino): bilang Batayan sa Pagpapaunlad ng Masining na Pagpapahayag at Pagpapalawak ng Bokabularyo sa Performans ng mga Mag-aaral.

Ang mananaliksik ay gumamit ng deskriptibong pamamaraan. Ang KALISAFI (Kagamitang Likha sa Filipino) ay nabuo at ginamit ng maanaliksik sa pitumpo't apat (74) na mag-aaral Bunggo National High School. Ang napiling tagatugon ay mula sa ika-11 baitang strand ng HUMMS pangkat Charity at Symphaty. Gumamit ang mananaliksik ng Purposive Sampling Technique. Ang talatanungan at worksheet ay ginamit upang masagot ang nasabing pag-aaral.

Lumbas sa resulta ng pag-aaral batay sa pagpapaunlad ng masining na pagpapahayag at pagpapalawak ng bokabularyo ang paggamit ng KALISAFI (Kagamitang Likha sa Filipino), ay katanggap-tanggap. Sa kabuuan ito ay may puna na lubos na sumasang-ayon at literal na palitwanag na kasiya-siya. Walang makabuluhang epekto ang paggamit ng KALISAFI (Kagamitang Likha sa Filipino): Bilang Batayan sa Pagpapaunlad ng Masining na Pagpapahayag at Pagpapalawak ng Bokabularyo sa Performans ng mga Mag-aaral batay sa pagsulat tula.

Hindi nagbigay ng makabuluhang epekto sa kamalayan ng mga mag-aaral ang paggamit ng worksheet (KALISAFI). Nangangahulugan lamang ito na kulang pa ang kaalaman nila sa pagsulat ng tula. Nangangahulugan din ito na hindi ganun kalawak ang kanilang talasalitaan upang makabuo ng isang masining na pahayag na magagamit nila sa pagsulat ng isang tula.

Iminumungkahi ng mananaliksik na umisip ng iba pang parametro o baryabol na gagamitin sa pag-aaral upang sukatin ang kamalayan ng mga mag-aaral sa pagsulat ng tula. Gamitin din ang mga datos na nakalap sa pag-aaral naito upang mapaunlad ang kagamitan na makatutulong na mapaunlad ang masining na pagpapahayag at pagpapalawak ng bokabularyo ng mga mag-aaral.

SUSING SALITA: : KALISAFI; bokabularyo; Performans

1. PANIMULA

Marami sa mga mag-aaral ang nahahirapan sa pagbuo ng isang masining na pahayag sapagkat limitado lamang ang kanilang talasalitaan o kaunti lamang ang alam nilang salita. Ang pagkakaroon ng limitadong talasalitaan ay isang malaking hamon sa mga mag-aaral upang makabuo ng isang masining na pahayag. Isa ito sa mga pagsubok na kinakaharap ng mga mag-aaral sa asignaturang Filipino mula sa iba't ibang baitang. Kaya naisipan ng mananaliksik na lumikha ng isang kagamitang pampagkatuto na tutugon sa suliraning ito.

Ayo nga kay Tety (2016), sa kaniyang pag-aaral na "Role of Instructional Materials in Academic Performance in Community Secondary Schools in Rombo District", upang makatugon sa pangangailangan at maitaas ang antas ng akademikong pagganap ng mag-aaral ang mga guro ay kailangang maging malikhain sa pagbuo ng kaugnay na materyal na gagamitin sa pagtuturo at pagkatuto. Mayroong positibong ugnayan ang kagamitang pampagkatuto at akademikong pagganap. Ang paaralan na nagtataglay ng maraming mapagkukunan ng kagamitang pampagkatuto ay tumataas ang performans ng mga mag-aaral sa akademikong

pagganap kaysa sa paaralan na maraming kakulangan sa kagamitang pampagkatuto.

Dagdag pa ni Gomez (2018), sa kaniyang pag-aaral na "Teacher- Made Worksheets to Develop Oral Language in an EFL Classroom", na ang gawa ng guro na materyal sa larangan ng edukasyon ay mahalagang estratehiya sa pag-agapay sa pagkatuto at pag-aaral sa epektibo at nakahihikayat na paraan. Naging Epektibo ang pag-aaral na ito dahil napaunlad ng kagamitang panturo na ito ang talasalitaan at oral na komunikasyon ng mag-aaral.

Dahil sa mga kakulangan sa kagamitang panturo ang kagawaran ng edukasyon ay naglabas ng DepEd Order No. 12, s. 2020, na nagsasabi na, ang mga guro ay maghahanda ng isang SLM's na tutugon sa pangangailan ng mag-aaral sa bawat aralin na nakabatay sa kakayahan ng mga mag-aaral.

Sa kabila ng mga pagsubok, handa ang mga guro na harapin ang mga hamon sa paglikha ng epektibong kagamitan sa pagtuturo ng Filipino sa Bagong Normal.



Upang matugunan ang pangangailangan ng mga mag-aaral sa kakulangan sa mga localize na kagamitang pang-interbensyon, ang SDO – Calamba ay nagbigay ng mga pagsasanay sa mga guro sa paggawa ng mga kagamitang panturo na maktutulong sa pangangailan ng mag-aaral kahit nasa loob man sila ng kanilang tahanan. Bilang susog sa programa ng Deped st SDO Calamba ang Bunggo National High School ay lumilikha ng mga materyal na pang-interbensyon sa iba't ibang asignatura.

Ang mga pagsasanay na ito mula sa Kagawaran ng Edukasyon at SDO Calamba ang naging dahilan ng mananaliksik upang bumuo ng isang kagamitang panturo na makatutulong na mapaunlad ang kakayahan ng mga mag-aaral sa masining na pagpapahayag at pagpapalawak ng bokabularyo. Dahil dito nabuo ng mananaliksik ang KALISAFI (Kagamitang Likha sa Filipino) na naglalayong mapaunlad ang masining na pagpapahayag at mapalawak ng bokabularyo ng mga mag-aaral na nasa ikalabing-isang baitang sa Bunggo National High School.

1.1 Paglalahad ng Suliranin

Dahil dito, ang pananaliksik ay naglalayon na masagot ang mga sumusunod na katanungan:

1. Ano ang kamalayan ng paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang pagpapaunlad sa masining na pagpapahayag batay sa:

- 1.1 Layunin;
- 1.2 Nilalaman;
- 1.3 Paglalapat;
- 1.4 Disenyo; at
- 1.5 Kaangkupan?

2. Ano ang kamalayan ng paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang pagpapalawak ng bokabularyo ng mga mag-aaral batay sa:

- 2.1 Kahulugan ng salita;
- 2.2 Istruktura ng salita; at
- 2.3 Simbolismo?

3. Ano ang antas ng performans ng mga mag-aaral batay sa pagsulat ng tula?

4. May makabuluhang epekto ba ang antas ng kamalayan sa paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang pagpapaunlad sa masining na pagpapahayag sa performans ng mga mag-aaral batay sa pagsulat ng tula?

5. May makabuluhang epekto ba ang antas ng kaalaman sa paggamit ng KALISAFI (Kagamitang Likha sa Filipino) sa pagpapalawak ng bokabularyo sa performans ng mga mag-aaral batay sa pagsulat ng tula?

6. Anong mga paraan o hakbang ang maaring mabuo upang mapaunlad ang KALISAFI (Kagamitang Likha sa Filipino).

2. METODOLOHIYA NG PANANALIKSIK

Ang pag-aaral na ito ay isinagawa ayon sa disenyo ng deskriptibong pamamaraan ng pananaliksik. Ang deskriptibong pananaliksik, ayon kay McCombes (2022), ay maaaring gamitin sa mga pag-aaral na may layuning matukoy ang mga

katangian, frequency, trend, relasyon at kategorya. Ito ay sinangayunan ni Voxco (2021), nang kaniyang ilahad na ang deskriptibong pananaliksik ay naglalarawan ng katangian ng isang populasyon. Ang pagkalap ng datos ang unang hakbang upang sagutin ang mga katanungang sa isang populasyon o grupo tulad ng ano, saan at paano. Ito ang nagiging sandigan sa pagbuo ng hypothesis bago sumailalim sa pagsusuring quantitative. Ang nabanggit na metodo ang siyang kinasangkapan ng mananaliksik sa paglikha ng hypothesis na makatutulong upang masagot ang mga suliranin ng pananaliksik.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay naglalaman ng presentasyon, analisis, at interpretasyon ng mga datos na nakalap ng mananaliksik. Nilalaman din ng kabanatang ito ang mga talahanayan na nagpapakita ng mga datos na nakalap upang mapabilis ang pag-unawa sa pag-aaral. Ang mga sumusunod na presentasyon, analisis at pagtalakay ay magbibigay ng linaw sa mga katanungang nais masagot ng pag-aaral na ito.

Ang mga impormasyon at datos na napaloob dito ay batay sa pagkakasunod-sunod ng pagblalahad ng suliranin. Ipinakita rin dito ang istatistikal na pamamaraan sa mga talahanayan na sumagot sa pananaliksik na KALISAFI (Kagamitang Likha sa Filipino) Bilang Batayan sa Masining na Pagpapahayag at Pagpapalawak ng Bokabularyo sa Performans ng mga Mag-aaral.

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapaunlad sa Masining na Pagpapahayag

Sa pag-aaral na ito, masusing sinuri ang nilalaman ng KALISAFI (Kagamitang Likha sa Filipino) upang matukoy kung paano makatutulong sa mga mag-aaral ang bawat bahagi nito. Kung paanong makatutulong ang mga bahagi nito sa abilidad ng mga mag-aaral sa proseso ng pagsulat.

Ang pag-aaral na ito ay naglalaman ng Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapaunlad sa Masining na Pagpapahayag batay sa layunin, nilalaman, paglalapat, disenyo at kaangkupan.

Upang matukoy ang mga datos na nakalap gumamit ang mananaliksik ng interpretasyon ang mga datos na galing sa respondante gamit ang Weighted Mean, Standard Deviation, at Literal na Paliwanag o Puna.

Ang paggamit ng mga kagamitang pampagkatuto tulad ng worksheet ay napakahalaga para sa mga mag-aaral dahil nagbibigay ito ng pagkakataon sa kanila na magsanay sa kanilang kasanayan sa malalaking aspeto ng pag-aaral.

Ang talahanayan 1 ay nagpapakita ng Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa layunin, nilalaman, paglalapat, disenyo at kaangkupan.



Talananayan 1

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Layunin

Mga Pahayag	Mean	SD	Puna
1. Malinaw at tiyak ang mga layunin na nakasaad sa Kagamitang Likha sa Filipino.	4.76	0.59	Lubos na sumasang-ayon
2. Nakabatay ang layunin sa nilalaman ng Kagamitang Likha sa Filipino.	4.75	0.55	Lubos na sumasang-ayon
3. Matatamo ng mga mag-aaral ang mga layunin na nakalahad sa Kagamitang Likha sa Filipino.	4.77	0.48	Lubos na sumasang-ayon
4. Maayos na nailahad ang layunin ng bawat aralin sa Kagamitang Likha sa Filipino.	4.80	0.43	Lubos na sumasang-ayon
5. Nakapagbibigay ng maayos na gabay ang mga nakalahad na layunin sa Kagamitang Likha sa Filipino.	4.81	0.39	Lubos na sumasang-ayon

Overall Mean: 4.80

Standard Deviation: 0.31

Literal na paliwanag: Lubhang Mataas

Sa unang pahayag na “Malinaw at tiyak ang mga layunin na nakasaad sa Kagamitang Likha sa Filipino” ay nakakuha ng mean iskor na 4.76 at standard deviation na 0.59 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangahulugan lamang ito na lubos na sumasang-ayon ang mga taga-tugon na malinaw at layuning nakapaloob sa kagamitang panturo.

Sa ikalawang pahayag na “Nakabatay ang layunin sa nilalaman ng Kagamitang Likha sa Filipino” ay nakakuha ng mean iskor na 4.75 at standard deviation na 0.55 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “Matatamo ng mga mag-aaral ang mga layunin na nakalahad sa Kagamitang Likha sa Filipino” ay nakakuha ng mean iskor na 4.77 at standard deviation na 0.48 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “Maayos na nailahad ang layunin ng bawat aralin sa Kagamitang Likha sa Filipino” ay nakakuha ng mean iskor na 4.80 at standard deviation na 0.43 na may

puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na *Nakapagbibigay ng maayos na gabay ang mga nakalahad na layunin sa Kagamitang Likha sa Filipino*” ay nakakuha ng mean iskor na 4.81 at standard deviation na 0.39 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang kabuoang mean na 4.80, standard deviation na 0.31, ipinapakita na ang Kamlayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Layunin ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Ipinakita ng talananayang 1 na malinaw na naipahayag ang layunin ng sa KALISAFI (Kagamitang Likha sa Filipino).

Nangangahulugan na ang layunin ay lubos na tinanggap ng mga tagatugon ng pananalikisik na ito.

Ang talananayan 2 ay nagpapakita ng Kamalayan sa paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang pagpapaunlad sa masining na bagpapahayag batay sa Nilalaman.

Talananayan 2

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Nilalaman

Mga Pahayag	Mean	SD	Puna
1. Mabilis maunawaan ang nilalaman ng kagamitang panturo.	4.77	0.58	Lubos na sumasang-ayon
2. Malinaw na nailahad ang aralin.	4.84	0.47	Lubos na sumasang-ayon
3. Tugma ang nilalaman batay sa layunin ng kagamitang pangturo.	4.89	0.35	Lubos na sumasang-ayon
4. May sapat na halimbawa ang bawat aralin upang madaling maintindihan ang paksa.	4.89	0.31	Lubos na sumasang-ayon
5. May malinaw na panuto sa bawat gawain.	4.96	0.20	Lubos na sumasang-ayon

Overall Mean: 4.90

Standard Deviation: 0.17

Literal na paliwanag: Lubhang Mataas

Ang mga datos na makikita sa itaas ay nagpapakita ng literal na palinawag na lubhang matas at may puna nalubos na sumasang-

ayon sa pananaw ng mga tagatugon.



Sa unang pahayag na “*Mabilis maunawaan ang nilalaman ng kagamitang panturo*” ay nakakuha ng mean iskor na 4.77 at standard deviation na 0. na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na *Malinaw na nailahad ang aralin*” ay nakakuha ng mean iskor na 4.84 at standard deviation na 0.47 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “*Tugma ang nilalaman batay sa layunin ng kagamitang pangturo*” ay nakakuha ng mean iskor na 4.89 at standard deviation na 0.35 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “*May sapat na halimbawa ang bawat aralin upang madaling maintindihan ang paksa*” ay nakakuha ng mean iskor na 4.89 at standard deviation na 0.31 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “*May malinaw na panuto sa bawat gawain*” ay nakakuha ng mean iskor na 4.96 at standard deviation na 0.320 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang kabuoang mean na 4.90, standard deviation na 0.17, pinapakita na ang Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Nilalaman ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangauhulugan na katanggap-tanggap sa mga tagatugon ang nilalaman ng kagamitang panturo.

Ang talahanayan 3 ay nagpapakita ng Kamalayan sa paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang pagpapaunlad sa masining na bagpapahayag batay sa Paglalapat.

Talahanayan 3

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Paglalapat

Mga Pahayag	Mean	SD	Puna
1. <i>Malinaw ang bawat panuto sa mga pagsasanay o gawain.</i>	4.85	0.54	Lubos na sumasang-ayon
2. <i>Maayos ang pagkakalahad ng mga gawain sa bawat paksang aralin.</i>	4.79	0.50	Lubos na sumasang-ayon
3. <i>Nakabatay ang mga gawain alinsunod sa layunin ng Kagamitang Likha sa Filipino.</i>	4.88	0.37	Lubos na sumasang-ayon
4. <i>Ang mga pagsasanay o gawain ay may iba’t ibang antas o lebel ng kahirapan.</i>	4.88	0.33	Lubos na sumasang-ayon
5. <i>Maayos ang pagkakasunod-sunod ng gawain.</i>	4.92	0.27	Lubos na sumasang-ayon
Overall Mean: 4.89			
Standard Deviation: 0.19			
Literal na paliwanag: Lubhang Mataas			

Ang mananaliksik ay nagbigay ng talatanungan at sinagutan ito ng mga tagatugon na nagmula sa Bunggo National High School.

Sa unang pahayag na “*Malinaw ang bawat panuto sa mga pagsasanay o gawain*” ay nakakuha ng mean iskor na 4.85 at standard deviation na 0.54 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na “*Maayos ang pagkakalahad ng mga gawain sa bawat paksang aralin*” ito ay nakakuha ng mean iskor na 4.79 at standard deviation na 0.50 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “*Nakabatay ang mga gawain alinsunod sa layunin ng Kagamitang Likha sa Filipino*” ay nakakuha ng mean iskor na 4.88 at standard deviation na 0.37 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “*Ang mga pagsasanay o gawain ay may iba’t ibang antas o lebel ng kahirapan*” ay nakakuha ng

mean iskor na 4.88 at standard deviation na 0.33 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “*Maayos ang pagkakasunod-sunod ng gawain*” ay nakakuha ng mean iskor na 4.92 at standard deviation na 0.27 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang kabuoang mean na 4.89, standard deviation na 0.19, pinapakita nito na ang Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Paglalapat ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangauhulugan na katanggap-tanggap sa mga tagatugon ang mga gawain na nakapaloob sa KALISAFI (Kagamitang Likha sa Filipino).

Ang talahanayan 4 ay nagpapakita ng Kamalayan paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang



pagpapaunlad sa masining na bagpapahayag batay sa Disenyo.

Talahanayan 4

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Disenyo

Mga Pahayag	Mean	SD	Puna
1. Kaaya-aya sa paningin ang mga larawang ginamit.	4.87	0.53	Lubos na sumasang-ayon
2. Hindi masakit sa mata ang mga kulay na ginamit sa Kagamitang Likha sa Filipino.	4.80	0.49	Lubos na sumasang-ayon
3. Sakto ang laki ng bawat larawan na ginamit.	4.85	0.39	Lubos na sumasang-ayon
4. Maayos ang pagkakahayan ng mga larawang ginamit.	4.88	0.33	Lubos na sumasang-ayon
5. Naging malikhain ang paglalarawan sa tulong ng mga graphics.	4.95	0.23	Lubos na sumasang-ayon

Overall Mean: 4.89

Standard Deviation: 0.19

Literal na paliwanag: Lubhang Mataas

Ang mananaliksik ay nagbigay ng talatanungan at sinagutan ito ng mga tagatugon na nagmula sa Bunggo National High School.

Sa unang pahayag na “Kaaya-aya sa paningin ang mga larawang ginamit” ay nakakuha ng mean iskor na 4.87 at standard deviation na 0.53 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na “Hindi masakit sa mata ang mga kulay na ginamit sa Kagamitang Likha sa Filipino” ay nakakuha ng mean iskor na 4.80 at standard deviation na 0.49 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “Sakto ang laki ng bawat larawan na ginamit” ay

nakakuha ng mean iskor na 4.88 at standard deviation na 0.37 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “Maayos ang pagkakahayan ng mga larawang ginamit” ay nakakuha ng mean iskor na 4.88 at standard deviation na 0.33 na may puna na lubos na sumasang-

ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “Naging malikhain ang paglalarawan sa tulong ng mga graphics” ay nakakuha ng mean iskor na 4.95 at standard deviation na 0.23 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang kabuoang mean na 4.89, standard deviation na 0.19, pinapakita nito na ang Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Disenyo ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangahulugang na ang mga datos sa itaas ay nagpapakita na katanggap-tanggap sa mga tagatugon ang disenyo ng kagamitang panturo.

Ang talahanayan 5 ay nagpapakita ng Kamalayan sa paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang pagpapaunlad sa masining na pagpapahayag batay sa Kaangkupan.

Talahanayan 5

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Kaangkupan

Mga Pahayag	Mean	SD	Puna
1. Nakaangkop ang mga salita sa larawang ginamit.	4.89	0.51	Lubos na sumasang-ayon
2. Nakatugma ang mga larawan sa mensaheng nais iparating ng teksto.	4.80	0.49	Lubos na sumasang-ayon
3. Nakabatay sa lebel ng pag-unawa ng mga mag-aaral ang mga gawaing nakalahad sa teksto.	4.88	0.37	Lubos na sumasang-ayon
4. Nakaangkla ang mga gawain batay sa bawat paksa.	4.95	0.23	Lubos na sumasang-ayon
5. Akma ang mga larawang ginamit sa bawat pagsasanay at gawain sa Kagamitang Likha sa Filipino.	4.96	0.20	Lubos na sumasang-ayon

Overall Mean: 4.92

Standard Deviation: 0.17

Literal na paliwanag: Lubhang Mataas



Ang mananaliksik ay nagbigay ng talatanungan at sinagutan ito ng mga tagatugon na nagmula sa Bunggo National High School.

Sa unang pahayag na “*Nakaangkop ang mga salita sa larawang ginamit*” ay nakakuha ng mean iskor na 4.89 at standard deviation na 0.51 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na “*Nakatugma ang mga larawan sa mensaheng nais iparating ng teksto*” ay nakakuha ng mean iskor na 4.80 at standard deviation na 0.49 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “*Nakabatay sa lebel ng pag-unawa ng mga mag-aaral ang mga gawaing nakalahad sa teksto*” ay nakakuha ng mean iskor na 4.88 at standard deviation na 0.37 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “*Nakaangkla ang mga gawain batay sa bawat paksa*” ay nakakuha ng mean iskor na 4.95 at standard deviation na 0.23 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “*Akma ang mga larawang ginamit sa bawat pagsasanay at gawain sa Kagamitang Likha sa Filipino*” ay nakakuha ng mean iskor na 4.95 at standard deviation na 0.20 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang kabuoang mean na 4.92, standard deviation na 0.17, pinapakita nito na ang Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Batayan sa Pagpapaunlad sa Masining na Pagpapahayag batay sa Kaangkupan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangngahulagan ito na may kaangkupan ang nilalaman ng KALISAFI (Kagamitang Likha sa Filipino) kaya ito ay lubos na tinanggap ng mga tagatugon.

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral

Upang malaman ang kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo batay sa kahulugan ng salita, istruktura ng salita, at simbolismo gumamit ang mananaliksik talatungan at sa pagsusuri ng mga datos na nakalap gumamit naman ng Weighted Mean, Standard Deviation, sa pagbibigay naman ng interpreasyon ginamitan ito ng puna at Literal na Paliwanag.

Talahanayan 6 Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Kahulugan ng Salita.

Sa unang pahayag na “*Wasto ang pagbibigay ng mga kahulugan sa bawat salita t*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.60 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na “*Direktang binigyan ng kahulugan ang mga salita*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.50 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “*Maayos na nailahad ang mga kahulugan ng mga salitang ginamit*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.30 ito ay may puna na lubos na sumasang-ayon at literal na paliwanag lubhang mataas.

Sa ikaapat na pahayag na “*Maayos at malinaw na nabigyang kahuluganang mga salitang ginamit sa Kagamitang Likha sa Filipino*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.30 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “*Payak ang mga salitang ginamit sa pagpapakahulugan*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.30 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Talahanayan 6

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Kahulugan ng Salita

Mga Pahayag	Mean	SD	Puna
1. <i>Wasto ang pagbibigay ng mga kahulugan sa bawat salita.</i>	4.90	0.60	Lubos na sumasang-ayon
2. <i>Direktang binigyan ng kahulugan ang mga salita.</i>	4.90	0.50	Lubos na sumasang-ayon
3. <i>Maayos na nailahad ang mga kahulugan ng mga salitang ginamit</i>	4.90	0.30	Lubos na sumasang-ayon
4. <i>Maayos at malinaw na nabigyang kahulugan ang mga salitang ginamit sa Kagamitang Likha sa Filipino.</i>	4.90	0.30	Lubos na sumasang-ayon
5. <i>Payak ang mga salitang ginamit sa pagpapakahulugan.</i>	4.90	0.30	Lubos na sumasang-ayon

Overall Mean: 4.90

Standard Deviation: 0.20

Literal na paliwanag: Lubhang Mataas



Ang kabuoang mean na 4.90, standard deviation na 0.20, pinapakita nito na ang Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Kahulugan ng Salita ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangahulugan ito ang maayos na malinaw at maayos na nailahad ang kahulugan ng mga salitang ginamit sa KALISAFI (Kagamitang Likha sa Filipino).

Ang mananaliksik ay nagbigay ng talatanungan at sinagutan ito ng mga tagatugon na nagmula sa Bunggo National High School.

Talahanayan 7 Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Istruktura ng Salita.

Sa unang pahayag na “*Organisado ang pagkakabalangkas ng mga salita*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.50 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na “*Madaling gamitin sa pagbibigay ng pangungusap ang mga salitang ginamit*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.40 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikatlong pahayag na “*Maayos ang pagkakabaybay ng mga salitang ginamit*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.40 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “*Angkop ang mga bantas na ginamit sa bawat pangungusap*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.40 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “*Payak at madaling maintindihan ang mga salitang ginamit sa pagpapakahulugan*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.30 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Ang kabuoang mean na 4.90, standard deviation na 0.20, pinapakita nito na ang Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Istruktur ng Salita ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangahulugan ito na maayos ang pagkakabaybay ng mga salita at maayos ang pagkakasulat ng mga pangungusap sa loob ng KALISAFI (Kagamitang Likha sa Filipino).

Talahanayan 7

Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Istruktura ng Salita

Mga Pahayag	Mean	SD	Puna
1. <i>Organisado ang pagkakabalangkas ng mga salita.</i>	4.90	0.50	Lubos na sumasang-ayon
2. <i>Madaling gamitin sa pagbibigay ng pangungusap ang mga salitang ginamit.</i>	4.90	0.40	Lubos na sumasang-ayon
3. <i>Maayos ang pagkakabaybay ng mga salitang ginamit.</i>	4.90	0.40	Lubos na sumasang-ayon
4. <i>Angkop ang mga bantas na ginamit sa bawat pangungusap.</i>	4.90	0.40	Lubos na sumasang-ayon
5. <i>Payak at madaling maintindihan ang mga salitang ginamit sa pagpapakahulugan.</i>	4.90	0.30	Lubos na sumasang-ayon

Overall Mean: 4.90

Standard Deviation: 0.20

Literal na paliwanag: Lubhang Mataas

Talahanayan 8 Kamalayan sa Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Simbolismo.

Sa unang pahayag na “*Ang mga simbolo na ginamit sa Kagamitang Likha sa Filipino ay naangkop sa lebel ng mga mag-aaral*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.50 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalawang pahayag na “*Ang mga simbolong ginamit ay may pagkakaisa at naakma sa hinihingi ng pangungusap*” ay nakakuha ng mean iskor na 4.80 at standard deviation na 0.50 na may puna na lubos na sumasang-ayon at literal na paliwanag

na lubhang mataas.

Sa ikatlong pahayag na “*Ang mga simbolong ginamit ay tumutugon sa ninanais na layunin ng Kagamitang Likha sa Filipino*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.40 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikaapat na pahayag na “*Ang mga simbolismong ginamit ay malinaw na naipahayag at nabigyan ng kahulugan*” ay nakakuha ng mean iskor na 4.90 at standard deviation na 0.30 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa ikalimang pahayag na “*Ang mga simbolismo na ginamit ay*



mga bagay/pangyayari na tumutugon sa pang-araw -araw na karanasan ng mga mag-aaral” ay nakakuha ng mean iskor na

4.90 at standard deviation na 0.30 na may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Talahanayan 8

Kamalayan ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Simbolismo

Mga Pahayag	Mean	SD	Puna
1. Ang mga simbolo na ginamit sa Kagamitang Likha sa Filipino ay naangkop sa lebel ng mga mag-aaral.	4.90	0.50	Lubos na sumasang-ayon
2. Ang mga simbolong ginamit ay may pagkakaisa at naaakma sa hinihingi ng pangungusap.	4.80	0.50	Lubos na sumasang-ayon
3. Ang mga simbolong ginamit ay tumutugon sa ninanais na layunin ng Kagamitang Likha sa Filipino.	4.90	0.40	Lubos na sumasang-ayon
4. Ang mga simbolismong ginamit ay malinaw na naipahayag at nabigyan ng kahulugan.	4.90	0.30	Lubos na sumasang-ayon
5. Ang mga simbolismo na ginamit ay mga bagay/pangyayari na tumutugon sa pang-araw -araw na karanasan ng mga mag-aaral.	4.90	0.30	Lubos na sumasang-ayon

Overall Mean: 4.90

Standard Deviation: 0.20

Literal na paliwanag: Lubhang Mataas

Ang kabuoang mean na 4.90, standard deviation na 0.20, pinapakita nito na ang Antas ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo ng mga Mag-aaral batay sa Kahulugan Simbolismo ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Nangangahulugan lamang ito na ang mga simbolismong ginamit ay lubos na katanggap-tanggap sa pananaw ng mga tagatugon. Ang simbolismo ang nagpapatingkad ng isang tula o iba pang mga akdang pampanitikan kaya nararapat lang na maayos na mailahad at maipakita sa isang akda ang mga simbolismong ginamit ng manunulat.

Antas ng Performans ng mga Mag-aaral batay sa Pagsulat ng Tula

Ang pananaliksik na ito ay naglalaman ng Antas ng Performans ng mga Mag-aaral batay sa Pagsulat ng Tula.

Upang matukoy ang ng Antas ng Performans ng mga Mag-aaral batay sa Pagsulat ng Tula, ang mananaliksik ay nagpasulat ng isang tula. Ito ay bibigyan ng marka o puntos sa pamamagitan ng pamantayan na inilahad. Ang mga datos na nakalap ay binigyan ng interpretasyon ang mga datos mula sa respondante sa pamamagitan ng paggamit ng *Frequency, Weighted Mean, Standard Deviation, Puna at Literal na Paliwanag*.

Ang talahanayan 9 ay naglalaman ng ng Antas ng Performans ng mga Mag-aaral batay sa Pagsulat ng Tula.

Talahanayan 9

Antas ng Performans ng mga Mag-aaral batay sa Pagsulat ng Tula

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
18 – 20	44	59.46	Pinakamahusay
14 – 17	30	40.54	Higit na mahusay
11 – 13	0	0.00	Mahusay
7 – 10	0	0.00	Hindi gaanong mahusay
4 – 6	0	0.00	Hindi mahusay
0 – 3	0	0.00	Lubos na hindi mahusay
Total	74	100	
Weighted Mean	17.97		
Pinakamababang Marka	15		
Pinakamataas marka	na 20		Lubos na Kasiyasiya
Standard Deviation	1.53		

Ang talahanayan ay malinaw na nagpapakita ng antas ng performans ng mga mag-aaral batay sa pagsulat ng tula, sa

kabuoang pitumpo’t apat limampu na tagatugon, ang raw score na “18 to 20” ay nakakuha ng pinakamataas na bilang na



apatnapu (40) o 59.46 % ng kabuoang tumugon at may mapaglarawang katumbas na Pinakamahusay. At ang raw score na “14 to 17” ay mayroong bilang na tatlumpu at pito (30) o 40.54% ng kabuoang tumugon at may mapaglarawang katumbas na Higit na Mahusay.

May kabuoang (Weighted Mean = 17.97, SD = 1.53) at (pinakamababang marka = 15, pinakamataas na marka = 20) ipinapakita na ang antas ng performans ng mga mag-aaral batay sa pagsulat ng tula ay may mapaglarawang katumbas na Pinakamahusay at may literal na paliwanag na Napakakasiya-siya.

Nangangahulugang naging epektibong kagamitan ang KALISAFI (Kagamitang Likha sa Filipino) upang mapaunlad ang kasanayan ng mga mag-aaral sa pagsulat ng tula.

Ang talahanayan 10 ay naglalaman ng Makabuluhang epekto ng paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapaunlad sa Masining na Pagpapahayag sa Performans ng mga Mag-aaral batay sa Pagsulat ng Tula.

Upang malaman kung makabuluhan ba ang epekto ang Makabuluhang epekto ng paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapaunlad sa Masining na Pagpapahayag sa Performans ng mga Mag-aaral batay sa Pagsulat ng Tula, gumamit ang mananaliksik ng *multiple regression*.

Talahanayan 10

Makabuluhang Epekto ng KALISAFI (Paggamit ng Kagamitang Likha sa Filipino) bilang Pagpapaunlad sa Masining na Pagpapahayag sa Performans ng mga Mag-aaral batay sa Pagsulat ng Tula

Pagganap	B	SE	B	T	p
Constant	14.17	6.432		2.203	0.031
Layunin		0.881	0.73	0.828	0.41
Nilalaman		1.547	1.757	1.136	0.26
Paglalatap		1.676	-2.47	-1.47	0.146
Disenyo		1.39	-0.68	-0.49	0.626
Kaangkupan		1.406	1.44	1.024	0.309
R-squared			.046		
Adjusted R-squared			-.02		
Standard Error of the Estimate		1.544			
F(5, 68)				.658	.657

*p < 0.05

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto ng paggamit ng Kagamitang Likha sa Filipino bilang pagpapaunlad sa masining na pagpapahayag sa performans ng mga mag-aaral batay sa pagsulat ng tula. Ang *regression model* ay nagpapaliwanag ng 4.6% ng *variance* sa performans ng mga mag-aaral (R-squared = 0.046). Ang *Layunin*, *Nilalaman*, *Paglalatap*, *Disenyo* at *Kaangkupan* ay walang positibong epekto sa performans ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan (F (5, 68) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na performans ng mga mag-aaral.

Ipinapakita nito na ang walang bisang palagay na “Walang Makabuluhang epekto sa antas ng kamalayan angnaggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapaunlad sa Masining na Pagpapahayag sa Performans ng mga Mag-aaral batay sa Pagsulat ng Tula” ay tanggapin. Sapagkat ang mga datos na nakalap sa pag-aaral ay nagpapakita “walang makabuluhang” epekto sa pagitan ng masining na pagpapahayag at pagsulat tula.

Ang Talahanayan 11 ay nagpapakita ng Makabuluhang Epekto ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo sa Performans ng mga Mag-aaray batay sa Pagsulat ng Tula.

Talahanayan 11

Makabuluhang Epekto ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Pagpapalawak ng Bokabularyo sa Performans ng mga Mag-aaral batay sa Pagsulat ng Tula

Pagganap	B	SE	B	t	P
Constant	21.43	5.187		4.132	1E-04
Kahulugan ng salita		1.236	0.093	0.075	0.94
Istruktura ng salita		1.539	0.136	0.088	0.93
Simbolismo		1.346	-0.93	-0.69	0.49
R-squared			.009		
Adjusted R-squared			-.03		
Standard Error of the Estimate		1.551			
F(5, 180)				.202	.895

*p < 0.05



Upang malaman kung makabuluhan ba ang epekto ng Makabuluhang Epekto ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Paghpapalawak ng Bokabularyo sa Performans ng mga Mag-aaray batay sa Pagsulat ng Tula.

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto ng paggamit ng Kagamitang Likha sa Filipino bilang pagpapaunlad sa masining na pagpapahayag sa performans ng mga mag-aaral batay sa pagsulat ng tula. Ang *regression model* ay nagpapaliwanag ng 0.9% ng *variance* sa performans ng mga mag-aaral (R-squared = 0.09). Ang *Kahulugan ng salita, Istruktura ng salita* at *Simbolismo* ay walang positibong epekto sa performans ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan (F (3, 71) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na performans ng mga mag-aaral.

Ipinapakita nito na ang walang bisang palagay na “ang Makabuluhang Epekto ng Paggamit ng KALISAFI (Kagamitang Likha sa Filipino) bilang Paghpapalawak ng Bokabularyo sa Performans ng mga Mag-aaray batay sa Pagsulat ng Tula” ay tanggapin. Sapagkat ang mga datos na nakalap sa pag-aaral ay nagpapakita “walang makabuluhang” epekto sa pagitan ng masining na pagpapahayag at pagsulat tula.

Sa isang kagamitang panturo ay nararapat na malinaw ang pagkakalahad ng kahulugan ng mga salita upang hindi magkaroon ng kalituhan ang mga mag-aaral tungkol sa mga salitang may malalim na kahulugan o mga salitang bago sa panlasa ng mga mag-aaral o mambabasa. Makakatulong din ang maayos na pagkakalahad ng kahulugan ng salita upang mapalawak ang bokabularyo ng mga mag-aaral na gagamit ng kagamitang panturo.

Mga Hakbang sa Pagpapaunlad ng KALISAFI (Kagamitang Likha sa Filipino)

Ang Talahanayan 12 ay nagpapakita ng mga mga hakbang sa pagpapaunlad ng KALISAFI (Kagamitang Likha sa Filipino).

Talahanayan 12
Hakbang sa Pagpapaunlad ng KALISAFI (Kagamitang Likha sa Filipino)

Layunin	Istratehiya/ Aktibiti	Mga Kasangkot	Inaasahang Awtput
Mapaunlad ang antas ng kaalaman sa denotasyon, konotasyon, idyoma, at tayutay	Pagdalo sa mga seminar na may tumatalakay sa denotasyon, konotasyon, idyoma, at tayutay. Magpatala sa mga maikling kurso na may kinalaman sa denotasyon, konotasyon, idyoma, at tayutay.	Punongguro, MT, HT, at Mga Guro sa Filipino	Sertipikasyong nagpapatunay ng pagdalo at pakikibahagi sa seminar at maikling kurso. Maipakita ang aplikasyon ng mga natutunan sa pamamagitan ng paggamit nito sa akwal na pagtuturo.
Malaman ang antas ng kaalaman ng mga mag-aaral sa denotasyon, konotasyon, idyoma, at tayutay	Magbigay ng paunang pagsusulat tungkol sa denotasyon, konotasyon, idyoma, at tayutay	Mga mag-aaral sa ika-11 baitang at mga guro sa Filipino	Analisisyon ng mga markang nakuha ng mga bata kung saan magagamit ito sa upang mabigyan sila ng tamang interbensyon.
Mapataas ang antas ng mga mag-aaral sa paggamit ng kagamitang pampagkatuto patungkol sa denotasyon, konotasyon, idyoma, at tayutay	Paggamit ng KALISAPI bilang isang interbensyon upang mapataas ang antas ng kaalaman ng mga mag-aaral Lokalisasyon ng KALISA upang higit na matugunan ang pangangailangan ng mga mag aaral	Mga Guro sa Filipino at ika-11 na mga mag-aaral	Tumaas ang antas ng kaalaman ng mga mag-aaral sa denotasyon, konotasyon, idyoma, at tayutay, at mahasa ang kanilang bokabularyo.

4. KONKLUSYON AT REKOMENDASYON

Base sa naging resulta ng pananaliksik, ang mga sumusunod na konklusyon ay nabuo.

1. Ang “walang makabuluhang epekto ng paggamit ng KALISAFI (Kagamitang Likha sa Filipino)” sa pagpapaunlad ng masining na pagpapahayag ay tinatanggap. Ngunit, maaari itong magbigay ng positibong epekto bilang maging batayan sa paglikha ng isang kagamitang panturo na makatutulong sa mga mag-aaral na mapaunlad ang kanilang kakayahang komunikatibo.

2. Ang “walang makabuluhang epekto ng paggamit ng KALISAFI (Kagamitang Likha sa Filipino)” sa pagpapalawak ng bokabularyo ng mga mag-aaral ay tinatanggap. Ngunit, maaari itong magbigay ng positibong epekto bilang maging batayan sa paglikha ng isang kagamitang panturo na makatutulong sa mga mag-aaral na mapalawak at mapayabong ang kanilang bokabularyo o talasalitaan.

Batay sa resulta at konklusyon sa pagsusuri, nabuo ang rekomendasyon sa pag-aaral.



1. Iminumungkahi ng mananaliksik na gumamit pa ng iba't ibang kagamitang panturo na makatutulong sa mga mag-aaral na mapaunlad ang kanilang kakayahang komunikatibo at makatutulong din na mapalawak ang kanilang bokabularyo.
2. Hinihikayat din ng mananaliksik na ituro ng personal ng mga guro ang mga sumusunod na aralin na nakapaloob sa "Kagamitang Likha sa Filipino Bilang Pagpapaunlad sa Masining na Pagpapahayag at Pagpapalawak ng Bokabularyo" upang lubos itong maintindihan ng mga mag-aaral.
3. Sa mga susunod na mananaliksik, iminumungkahi ng mananaliksik na gawing batayan ang mga datos na nabuo mula sa pag-aaral na ito, upang makabuo ng mas epektibong kagamitang panturo na makatutulong sa mga mag-aaral na mapaunlad ang kanilang kakayahang komunikatibo at makatutulong din sa kanila na mapalawak ang kanilang bokabularyo.

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SANAYSAY AT MALIKHAING PAGSULAT NG MGA MAG-AARAL TUNGO SA PAGBUO NG MANWAL

Aira Mae A. Yasoña

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Ang pag-aaral na ito ay nakatuon sa Sanaysay at Malikhaing Pagsulat ng mga Mag-aaral Tungo sa Pagbuo ng Manwal. Ang layunin ay matukoy ang antas ng gabay sa pagsulat; katangian sa pagsulat; pagganap ng mga mag-aaral batay sa malikhaing pagsulat ng sanaysay; alamin kung may makabuluhang ugnayan ang gabay at katangian sa pagsulat ng sanaysay sa pagganap ng mga mag-aaral; at gayundin kung may makabuluhang ugnayan ang pamantayan sa pagganap ng mga mag-aaral sa pagsulat ng sanaysay.

Binuo ng pitong (7) pangkat ang mga tagatugon sa pananaliksik na nagmula sa iba't ibang strand ng Senior High School sa Laguna State Polytechnic University Sta. Cruz Main Campus na hinirang sa pamamagitan ng purposive sampling. Ginamit sa pananaliksik na ito ang deskriptibong pamamaraan. Gumamit ang mananaliksik ng talatanungan at sumulat ang mga mag-aaral ng isang malikhaing pagsulat upang makalap ang datos.

Ukol sa mga natuklasan, ang antas ng gabay at katangian sa pagsulat ng sanaysay ng mga mag-aaral ay masasabing lubhang mataas sapagkat ito ay lubos na sinang-ayunan. Lumabas na ang antas ng pagganap ng mga mag-aaral batay sa malikhaing pagsulat ay kasiya-siya. Batay sa mga resulta, naipakitang "may makabuluhang" kaugnayan sa pagitan ng gabay at katangian sa pagsulat ng sanaysay sa pagganap ng mga mag-aaral gayundin sa huli, lumantad sa resulta na "may makabuluhang" ugnayan sa pagitan ng pamantayan sa pagsulat ng sanaysay at pagganap ng mga mag-aaral.

Batay sa mga datos na lumabas, napatunayang may makabuluhang ugnayan sa pagitan ng gabay at katangian sa pagsulat ng sanaysay gayundin ang pamantayan sa pagganap ng mga mag-aaral kung kaya't ang mga hypothesis ay huwag tanggapin sapagkat ang mga ito ay napawalang bisa. Ipinakita ng mga kinalabasan na ang gabay at katangian sa pagsulat ng sanaysay gayundin ang pamantayan sa pagsulat ay lubos na nakatutulong sa malikhaing pagsulat ng sanaysay.

Hango sa kinalabasan at konklusyon ng pag-aaral, iminumungkahi ng mananaliksik ang rekomendasyon para sa mga susunod na mananaliksik ay maaaring susugan ang isinagawang pag-aaral upang makapaglunsad ng iba't ibang teknik o dulog na lalong mapauunlad ang kakayanan sa pagganap ng mga mag-aaral sa malikhaing pagsulat

SUSING SALITA: Sanaysay; Malikhaing Pagsulat; Pagbuo ng Manwal

1. PANIMULA

Sa larangan ng edukasyon, ang pagsulat ay isang pundamental na kasanayang kailangang linangin ng bawat mag-aaral. Nagsisilbi itong instrumento na nagagamit upang matasa ang kanilang kaalaman, maipahayag ang kanilang mga hinaing o ideya, at makisangkot sa akademikong komunidad. Nagsisimula ang mabisang pagsulat sa pagkakaroon ng malinaw na layunin at wastong kaalaman sa paggamit ng wika.

Mahalaga ang papel na ginagampanan ng kaguruan sa pagpapaunlad ng kritikal na pag-iisip ng mga mag-aaral sa pamamagitan ng pagsulat. Pinapanday nila ang mga mag-aaral kung papaano suriin ang iba't ibang impormasyon at magpahayag ng kanilang sariling pananaw sa isang lohikal at sistematikong paraan.

Ayon sa Department Order No. 21, s. 2020, "Patuloy na nararanasan ang kakulangan ng mga kagamitang panturo lalo't higit rural na lugar, na isang balakid sa epektibong pagtuturo ng pagsulat ng sanaysay." (Department of Education, 2020).

Ang kakulangan sa mga aklat, modyul, at iba pang panturo ay malaking balakid sa edukasyon sa Pilipinas, partikular sa pagsulat ng sanaysay. Ang kawalan ng materyales ay

naglilimita sa kakayahan ng mga guro na magbigay ng komprehensibong pagtuturo.

Sinuportahan din ito ng Department Order No. 42, s. 2021 kung saan nailahad na: "Ang kaguruan ay nangangailangan ng patuloy na pagsasanay upang mapanday ang kanilang sarili sa pagtuturo ng sanaysay. Ang kakulangan sa paglulunsad ng workshop at seminar para sa kaguruan ay nagiging balakid sa kanilang pagiging epektibo sa pagtuturo." (Department of Education, 2021).

Samantala, inilahad ni Bautista (2023), na ang limitadong oras na inilaan sa malikhaing pagsulat sa loob ng kurikulum ay isang malaking balakid sa paglinang ng kasanayang ito. Kadalasan, ang oras na nararapat gugulin para sa malikhaing pagsulat ay ikinukumpromiso upang bigyang-daan ang iba pang mga asignatura.

Nang unti-unting bumalik ang lahat sa normal ay napansin ang kahirapan ng mga mag-aaral at kaguruan. Marami sa mga mag-aaral ang nahirapan hindi lamang sa pagbasa at pag-unawa sa mga akademikong sulatin kundi maging sa pagsulat ng mga sanaysay. Ang kakulangan ng sapat na oras para sa pagtuturo ng sanaysay sa loob ng kurikulum ay nagreresulta sa mababaw na kabatiran at kasanayan ng mga mag-aaral sa pagsulat. Kaya naman bilang guro sa Filipino, ninais ng mananaliksik na



makatulong sa paaralan upang mapataas ang antas sa pagganap ng mga mag-aaral sa pagsulat at naisip ng mananaliksik na bumuo ng isang interbensyon – ang manwal bilang makabagong pagdulog din sa asignaturang Filipino. Sa ganitong paraan, ang paglikha ng manwal para sa malikhaing pagsulat ay hindi lamang naglalayon na matulungan ang mga mag-aaral at manunulat sa kanilang paglalakbay kundi pati na rin sa pagpapalakas at pagpapalaganap ng kaalaman sa larangang ito.

1.1 Paglalahad ng Suliranin

Ang mga katanungan ang sasagutin sa pananaliksik na ito:

1. Ano ang antas ng gabay sa pagsulat ng sanaysay batay sa:
 1. 1. Malinaw;
 1. 2. Organizado;
 1. 3. Istruktura; at
 1. 4. Orihinalidad?
2. Ano ang antas ng katangian sa pagsulat ng sanaysay batay sa:
 - 2.1. Introduksyon;
 - 2.2. Kaisahan;
 - 2.3. Kohirens; at
 - 2.4. Kawastuhan?
3. Ano ang antas ng pagganap ng mag-aaral batay sa Malikhaing Pagsulat?
4. May makabuluhang kaugnayan ba ang gabay at katangian sa pagsulat ng sanaysay sa pagganap ng mga mag-aaral?
5. May makabuluhang kaugnayan ba ang pamantayan sa pagganap ng mga mag-aaral sa pagsulat ng sanaysay?
6. Anong planong gawain ang makatutulong upang magkaroon ng mas maunlad na pagganap sa malikhaing pagsulat batay sa resulta ng pagsusuri?

2. METODOLOHIYA NG PANANALIKSIK

Ang ginamit na disenyo sa pananaliksik na ito ay deskriptibong paraan o ang palarawang pananaliksik (Descriptive Method). Layunin nitong mailarawan gamit ang talatanungan upang mas lalong mapagtibay ang mga datos na nakalap sa pag-aaral.

Ayon kay De Leon (2018), nilalayan ng pag-aaral na ito na matuklasan ang karaniwang kalagayan, proseso at gayundin ang sanhi at bunga ng mga ugnayan ng mga napiling baryabol sa isang pag-aaral. Ito ay nagagamit sa pagbibigay ng datos batay sa siyentipikong paghusga na nagiging daan upang magkaroon ng pangunahing kaalaman tungkol sa kalikasan ng mga bagay at tao. Nagbibigay rin ito ng hayagang obserbasyon ng paggamit, pagsasagawa, pag-uugali, pamamaraan, at mga hakbang. Malaki ang ginagampanan nito sa pag-unlad ng mga kagamitan sa pagsukat at pagtataya ng mga bagay-bagay na siyang nagiging daan sa pagbuo ng mga tagubilin sa lokal, nasyonal, at pang-internasyonal na antas.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay tumutukoy sa paglalahad sa mga nakalap na datos. Ito ay binigyan ng kaukulang presentasyon, pag-aanalisa, at interpretasyon ng mga datos sa pamamagitan ng mga talahanayan upang mabigyang kasagutan ang mga inilalahad na suliranin sa pag-aaral na ito. Ang bawat impormasyong nakuha ay inilalahad nang maayos sa mga talahanayan.

Antas ng Gabay sa Pagsulat ng Sanaysay

Ang pag-aaral na ito ay naglalaman antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Malinaw, Organizado, Istruktura, at Orihinalidad.

Sa pagkuha ng resulta makikita sa mga sumusunod na talahanayan ang mga pahayag, mean, standard deviation, mga puna, at berbal na interpretasyon upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Ang talahanayan 1 ay nagpapakita ng Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Malinaw. Ito ay makikita sa unang baryabol na kung saan ay napakahalaga sa pagsulat ng sanaysay ng mag-aaral. Kinakailangang may sapat na kaalaman ang mag-aaral sa usaping ito upang malinaw niyang mailahad ang nais niyang maipabatid sa kanyang sanaysay.

Ang talahanayan 1 ay binubuo ng mga pahayag tungkol sa Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Malinaw.

Talahanayan 1

Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Malinaw

Mga Pahayag	Mean	SD	Puna
Ang paggamit ng mga halimbawa at detalye ay nagbibigay ng suporta sa mga pahayag at nagpapakita ng kawastuhan.	4.77	0.44	Lubos na sumasang-ayon
Kailangang maayos at malinaw ang daloy ng sanaysay sa pagitan ng mga talata at ideya.	4.82	0.40	Lubos na sumasang-ayon
Mahalaga ang maayos na pag-uulit ng mahahalagang impormasyon sa mambabasa.	4.62	0.56	Lubos na sumasang-ayon
Ang paggamit ng mga tuntunin ng wika tulad ng bantas, tuldik, at bokabularyo ay nagpapakita ng kahusayan sa pagsulat.	4.72	0.53	Lubos na sumasang-ayon
Ang pagkakasunod-sunod ng mga pangyayari o opinyon ay nagpapakita ng malalim na pag-unawa.	4.67	0.59	Lubos na sumasang-ayon

Overall Mean: 4.72

Standard Deviation: 0.34

Literal na paliwanag: Lubhang Mataas



Makikita sa talahanayan ang resulta sa lubhang mataas na antas ng gabay sa pagsulat ng sanaysay ng mga mag-aaral batay sa malinaw. Kailangang maayos at malinaw ang daloy ng sanaysay sa pagitan ng mga talata at ideya ay nakakuha ng ($M=4.82$, $SD=0.40$) at ang paggamit ng mga halimbawa at detalye ay nagbibigay ng suporta sa mga pahayag at nagpapakita ng kawastuhan ay mayroong ($M=4.77$, $SD=0.44$). Kahit na lubhang mataas na antas ng gabay sa pagsulat batay sa malinaw, ang pahayag na mahalaga ang maayos na pag-uulit ng mahahalagang impormasyon sa mambabasa at mayroong ($M = 4.62$, $SD = 0.56$) ay siyang may pinakamababang marka.

Ang kabuoang mean na 4.72, standard deviation na 0.34 ay nagpapakita na ang antas ng gabay sa pagsulat ng sanaysay ng mga mag-aaral batay sa malinaw ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Sa resultang nakalap ay nangangahulugang may sapat na kaalaman sa kalinawan sa pagsulat ang mga mag-aaral.

Ang mga natamong resulta ay naglalahad na ang mga mag-aaral ay mahusay sa paglikha ng malinaw at maayos na daloy ng

sanaysay, gayundin sa paggamit ng mga angkop na halimbawa at detalye upang masuportahan ang kanilang mga pahayag.

Sa malikhaing pagsulat, ang pagiging “malinaw” ay isang mahalagang katangiang nagbibigay-daan sa mambabasa upang maunawaan ang mensahe, layunin, at kaisipan ng manunulat. Ang kalinawan ay nakakuha sa pamamagitan ng maayos na estruktura, simpleng wika, lohikal na pagpapahayag ng mga ideya, at kohesyon sa kabuoan ng akda. Ang pagiging malinaw sa pagsulat ay tumutulong upang makapaghatid ng isang mabisa at epektibong komunikasyon sa mga mambabasa.

Ang talahanayan 2 ay nagpapakita ng Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Organizado. Ito ay makikita sa unang baryabol na kung saan ay napakahalaga sa pagsulat ng sanaysay ng mga Mag-aaral. Kinakailangang may sapat na kaalaman ang mga mag-aaral sa usaping ito upang maging maayos ang daloy ng isang sanaysay. Ang talahanayang ito ay naglalaman ng mga pahayag upang makuha ang Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Organizado.

Talahanayan 2
Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Organizado

Mga Pahayag	Mean	SD	Puna
Mahalagang masunod ang mga hakbang sa pagpapalano upang maging organisado ang pagsulat ng mga sanaysay.	4.78	0.45	Lubos na sumasang-ayon
Ang pagiging organisado sa pagsulat ay nagpapakita ng kahusayan sa paghahanap, pag-aayos, at pagpili ng mga impormasyon na may kaugnayan sa paksa.	4.74	0.50	Lubos na sumasang-ayon
Mas madaling maipahayag ang mga ideya at mensahe sa malinaw at sistematikong pamamaraan.	4.77	0.46	Lubos na sumasang-ayon
Mahalaga ang paggamit ng mga pang-ugnay para mabuo ang mga bahagi ng sanaysay.	4.73	0.51	Lubos na sumasang-ayon
Nagbibigay linaw tungo sa mas malalim na pag-unawa at pagsasaliksik ang mga organisadong sulatin.	4.71	0.55	Lubos na sumasang-ayon

Overall Mean: 4.75

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Ipinapakita ng talahanayan ang resultang lubhang mataas ang antas ng gabay sa pagsulat ng sanaysay batay sa organisado, ang indikektor na mahalagang masunod ang mga hakbang sa pagpapalano upang maging organisado ang pagsulat ng mga sanaysay ay nakakuha ng ($M=4.78$, $SD=0.45$) at mas madaling maipahayag ang mga ideya at mensahe sa malinaw at sistematikong paraan ay mayroong ($M=4.77$, $SD=0.46$). Kahit pa lubhang mataas na antas ng gabay sa pagsulat batay sa organisado, nakakuha ng pinakamababang marka ang pahayag na nagbibigay linaw tungo sa mas malalim na pag-unawa at pagsasaliksik ang mga organisadong sulatin at mayroong ($M = 4.71$, $SD = 0.55$).

Ang kabuoang mean na 4.75, standard deviation na 0.35 at ipinapakita na ang antas ng gabay sa pagsulat ng sanaysay batay sa organisado ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Nagpapakita ito ng pagkakaroon ng kaalaman ng mga mag-aaral sa pagkakaroon

ng organisasyon sa pagsulat.

Ito ay nagpapahiwatig na ang mga mag-aaral ay may sapat na kaalaman at kasanayan sa pagkakaroon ng organisasyon sa kanilang pagsulat, na nagpapadali sa malinaw na pagpapahayag ng kanilang mga ideya at mensahe sa isang sistematikong paraan.

Ang Talahanayan 3 ay ay nagpapakita ng Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Istruktura. Ito ay makikita sa unang baryabol na kung saan ay napakahalaga sa pagsulat ng sanaysay ng mga mag-aaral. Kinakailangang may sapat na kaalaman ang mag-aaral sa usaping ito upang mapalalim nang husto ang kahulugan ng sanaysay. Ang talahanayang ito ay naglalaman ng mga pahayag upang makuha ang Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Istruktura.



Talahanayan 3

Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Istruktura

Mga Pahayag	Mean	SD	Puna
Mas madaling maunawaan ng mga mambabasa ang bawat kaisipang taglay ng isang sulatin.	4.56	0.57	Lubos na sumasang-ayon
Kapag maganda ang sanaysay ay mas nagiging epektibo ang pagpapahayag.	4.68	0.57	Lubos na sumasang-ayon
Mas nagiging malinaw at sistematiko ang mga argumento at katibayan sa pamamagitan ng tamang istruktura.	4.75	0.53	Lubos na sumasang-ayon
Nagpapakita ng kaayusan at pagkakasunod-sunod ng mga ideya, na nagpapalakas sa kabuoan ng sanaysay.	4.72	0.49	Lubos na sumasang-ayon
Nakatutulong upang maging malinaw at malaman ang direksyon at layunin ng pagsulat.	4.74	0.48	Lubos na sumasang-ayon

Overall Mean: 4.69

Standard Deviation: 0.37

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 3 ay naglalahad ng Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Istruktura. Ipinapakita ng talahanayan ang resulta na may literal na paliwanag na *lubhang mataas* ang antas ng gabay sa pagsulat ng sanaysay ng mga mag-aaral batay sa istruktura. Ang pahayag na *mas nagiging malinaw at sistematiko ang mga argumento at katibayan sa pamamagitan ng tamang istruktura* ay nakakuha ng ($M=4.75$, $SD=0.53$) at ang *nakatutulong upang maging malinaw at malaman ang direksyon at layunin ng pagsulat* ay mayroong ($M=4.74$, $SD=0.48$). Kahit pa *lubhang mataas* na antas ng gabay sa pagsulat batay sa istruktura, nakakuha ng pinakamababang marka ang pahayag na ang pahayag na *mas madaling maunawaan ng mga mambabasa ang bawat kaisipang taglay ng isang sulatin* at mayroong ($M = 4.56$, $SD = 0.57$).

Ang kabuoang mean na 4.69, standard deviation na 0.37 at ipinapakita na ang Antas ng Gabay sa Pagsulat ng Sanaysay

batay sa Istruktura ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*. Makikita rin sa resulta na may kaalaman ang mga mag-aaral sa istruktura.

Ang resulta ay nagpapahiwatig na ang mga mag-aaral ay may sapat na kaalaman sa tamang paggamit ng istruktura sa kanilang mga sanaysay, na nakatutulong upang maging malinaw at sistematiko ang kanilang mga argumento at layunin.

Ang talahanayan 4 ay naglalahad ng Antas ng Gabay sa Pagsulat ng Sanaysay batay sa Orihinalidad. Ito ay makikita sa unang baryabol na kung saan napakahalaga sa pagsulat ng sanaysay ng mga mag-aaral. Kinakailangang may sapat na kaalaman ang mga mag-aaral sa usaping ito upang mapaigting ang pagpapanatili ng orihinalidad sa pagsulat ng sanaysay. Ang talahanayang ito ay naglalaman ng mga pahayag upang makuha ang Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Orihinalidad.

Talahanayan 4

Antas ng Gabay sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Orihinalidad

Mga Pahayag	Mean	SD	Puna
Naipamamalas ang sariling boses at pananaw na lumitaw sa isang sanaysay.	4.65	0.55	Lubos na sumasang-ayon
Nagpapakita ng iyong kakaibang pag-iisip at kahusayan sa paggamit ng wikang Filipino.	4.60	0.61	Lubos na sumasang-ayon
Nagbibigay-daan sa mga bagong ideya at konsepto na maaaring magbigay ng malalim na kahulugan sa iyong sanaysay.	4.69	0.52	Lubos na sumasang-ayon
Nakatutulong sa paglikha ng mga kakaibang estilo at estruktura ng sanaysay na magpapaiba sa iyong akda.	4.53	0.66	Lubos na sumasang-ayon
Nagpapakita ng iyong kakayahan sa paghahanap ng mga bagong perspektibo at solusyon sa mga suliranin na iyong tinalakay.	4.77	0.57	Lubos na sumasang-ayon

Overall Mean: 4.65

Standard Deviation: 0.44

Literal na paliwanag: Lubhang Mataas

Malinaw na ipinapakita sa talahanayan na *lubhang mataas* ang antas ng gabay sa pagsulat ng sanaysay batay sa orihinalidad, ang mga indiktor na *nagpapakita ng iyong kakayahan sa paghahanap ng mga bagong perspektibo at solusyon sa mga suliranin na iyong tinalakay* ay nakakuha ng ($M=4.77$,

$SD=0.57$) at ang *nagbibigay-daan sa mga bagong ideya at konsepto na maaaring magbigay ng malalim na kahulugan sa iyong sanaysay* ay mayroong ($M=4.69$, $SD=0.52$). Kahit pa *lubhang mataas* na antas ng gabay sa pagsulat batay sa orihinalidad, nakakuha ng pinakamababang marka ang pahayag



na nakatutulong sa paglikha ng mga kakaibang estilo at estruktura ng sanaysay na magpapaiba sa iyong akda at mayroong ($M = 4.53, SD = 0.66$).

Ang kabuoang mean na 4.65, standard deviation na 0.44 at ipinapakita na ang Antas ng Gabay sa Pagsulat ng Sanaysay batay sa Orihinalidad ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas. Makikita rin sa result ana may kaalaman ang mga mag-aaral sa pagpapanatili ng orihinalidad sa pagsulat ng sanaysay.

Ipinapakita ng mga resulta na ang mga mag-aaral ay may sapat na kaalaman at kasanayan sa pagpapanatili ng orihinalidad sa kanilang pagsulat ng sanaysay, na nagdudulot ng mga bagong ideya at perspektibo na nagbibigay ng mas malalim na

kahulugan at pagkakaiba sa kanilang mga akda.

Antas ng Katangian sa Pagsulat ng Sanaysay

Ang talahanayan ay naglalaman ng Antas ng Katangian sa Pagsulat ng Sanaysay batay sa Introduksyon, Kaisahan, Kohirens, at Kawastuhan.

Sa pagkuha ng resulta makikita sa mga sumusunod na talahanayan ang mga pahayag, mean, standard deviation, mga puna, at berbal na interpretasyon upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Ang talahanayan 5 ay naglalaman ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Introduksyon.

Talahanayan 5
Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Introduksyon

Mga Pahayag	Mean	SD	Puna
Ang paggamit ng malikhaing pangungusap o panghila ng pansin ng mambabasa ay nagpapalakas sa epekto ng panimula.	4.73	0.52	Lubos na sumasang-ayon
Ang paglalahad ng pangunahing argumento ay nagtatakda ng direksyon ng sanaysay.	4.60	0.56	Lubos na sumasang-ayon
Ang paggamit ng mga sanggunian ay nagpapalakas sa kredibilidad ng manunulat.	4.64	0.60	Lubos na sumasang-ayon
Ang pagbuo ng isang maganda at kapana-panabik na panimula ay nagpapakita ng kasanayan ng manunulat sa pagkuha ng atensyon ng mambabasa.	4.79	0.48	Lubos na sumasang-ayon
Ang paglalahad ng isang personal na karanasan o kuwento ay nagpapakita ng koneksiyon sa paksa at nagpapahiwatig ng pang-emosyonal na aspeto.	4.58	0.61	Lubos na sumasang-ayon

Overall Mean: 4.67

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 5 ay naglalahad ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Introduksyon. Lumabas ang resulta na may literal na paliwanag na *lubhang mataas* ang antas ng katangian sa pagsulat ng mga mag-aaral batay sa introduksyon, *ang pagbuo ng isang maganda at kapanapanabik na panimula ay nagpapakita ng kasanayan ng manunulat sa pagkuha ng atensyon ng mambabasa ay nakakuha ng ($M=4.79, SD=0.48$) at ang paggamit ng malikhaing pangungusap o panghila ng pansin ng mambabasa ay nagpapalakas sa epekto ng panimula ay mayroong ($M=4.73, SD=0.52$). Kahit pa napansin na *lubhang mataas* na antas ng katangian sa pagsulat, ang pahayag na may pinakamababang marka ay ang *paglalahad ng isang personal na karanasan o kuwento ay nagpapakita ng koneksiyon sa paksa at nagpapahiwatig ng pang-emosyonal na aspeto* at mayroong ($M = 4.58, SD = 0.61$).*

May kabuoang mean na 4.67, standard deviation na 0.35 at ipinapakita na ang antas ng katangian sa pagsulat ng sanaysay batay sa Introduksyon ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*. Ipinakita batay sa

resulta ang kahalagahan ng introduksyon sa katangian sa pagsulat ng sanaysay.

Ang mga resulta ay naglalarawan ng kahalagahan ng introduksyon sa pagsulat ng sanaysay na nagpapakita na ang mga mag-aaral ay may sapat na kaalaman at kasanayan sa paglikha ng makabuluhang panimula na nakakukuha ng atensyon ng mambabasa at nagpapalakas ng kabuoang epekto ng kanilang sanaysay.

Ang talahanayan 6 ay nagpapakita ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kaisahan. Ito ay makikita sa baryabol na kung saaan ay napakahalaga sa pagsulat ng sanaysay ng mag-aaral. Kinakailangang may sapat na kaalaman ang mag-aaral sa usaping ito upang mapalalim nang husto ang ideya o mensahe ng sanaysay. Ang talahanayang ito ay naglalaman ng mga pahayag mean, standard deviation, at mga puna upang makuha ang Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kaisahan.



Talahanayan 6

Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kaisahan

Mga Pahayag	Mean	SD	Puna
Magkakaugnay ang kabuoan ng sanaysay.	4.77	0.46	Lubos na sumasang-ayon
Nagpapakita ng kalinawan ng paksa.	4.77	0.44	Lubos na sumasang-ayon
Naglalahad ng isang kaisipan.	4.66	0.55	Lubos na sumasang-ayon
Nagpapakita ng isang diwa ng sanaysay.	4.69	0.52	Lubos na sumasang-ayon
May malinaw pagkakasunod-sunod ng mga ideya.	4.81	0.44	Lubos na sumasang-ayon

Overall Mean: 4.74

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 6 ay naglalahad ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kaisahan. Lumabas ang resulta na may literal na paliwanag na *lubhang mataas* ang antas ng katangian sa pagsulat ng mga mag-aaral batay sa kaisahan, *may malinaw na pagkakasunod-sunod ng mga ideya* ay nakakuha ng ($M=4.81, SD=0.44$) at *ang magkakaugnay na kabuoan ng sanaysay* ay mayroong ($M=4.77, SD=0.46$). Kahit pa napansin na *lubhang mataas* na antas ng katangian sa pagsulat, ang pahayag na may pinakamababang marka ay ang *naglalahad ng isang kaisipan* at mayroong ($M = 4.66, SD = 0.55$).

May kabuoang mean na 4.74, standard deviation na 0.35 at ipinapakita na ang antas ng katangian sa pagsulat ng sanaysay batay sa Kaisahan ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*. Ipinakita rin sa resulta ang kakayahan ng mga mag-aaral na makalikha ng sanaysay na nagtataglay ng kaisahan.

Ang mga resulta ay nagpapahiwatig na ang mga mag-aaral ay may kakayahang makalikha ng sanaysay na nagtataglay ng kaisahan, na may malinaw at magkakaugnay na pagkakasunod-sunod ng mga ideya, na nagreresulta sa isang komprehensibo at organisadong akda.

Ang talahanayan 7 ay nagpapakita ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kohirens. Ito ay makikita sa baryabol na kung saan ay napakahalaga sa pagsulat ng sanaysay ng mga mag-aaral. Kinakailangang may sapat na kaalaman ang mga mag-aaral sa usaping ito upang mapalalim nang husto ang kaugnayan ng bawat talata sa isang sanaysay. Ang talahanayan ito ay naglalaman ng mga pahayag, mean, standard deviation, at mga puna upang makuha ang Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kohirens.

Talahanayan 7

Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kohirens

Mga Pahayag	Mean	SD	Puna
Ang paggamit ng mga salita, parirala, at pangungusap ay nagpapakita ng kahulugan at ugnayan sa buong sanaysay.	4.69	0.53	Lubos na sumasang-ayon
Ang mga halimbawa at detalye ay nagpapaliwanag at nagbibigay ng suporta sa mga argumento ng sanaysay.	4.70	0.54	Lubos na sumasang-ayon
Ang bawat talata ay naglalaman ng iisang pangunahing ideya o punto na nagbibigay ng malinaw na direksyon.	4.64	0.53	Lubos na sumasang-ayon
Nagiging gabay tungo sa pagbibigay ng malinaw na istruktura at organisasyon sa pagsulat ng sanaysay.	4.70	0.51	Lubos na sumasang-ayon
Nagbibigay ng malinaw na pag-unawa sa mga mambabasa tungkol sa layunin at mensahe ng sanaysay.	4.72	0.49	Lubos na sumasang-ayon

Overall Mean: 4.69

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 7 ay naglalahad ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kohirens. Lumabas ang result ana may literal na pahayag na *lubhang mataas* na antas ng katangian sa pagsulat ng sanaysay ng mga mag-aaral batay sa kohirens, *nagbibigay ng malinaw na pag-unawa sa mga mambabasa tungkol sa layunin at mensahe ng sanaysay* ay nakakuha ng ($M=4.72, SD=0.49$) at *ang mga halimbawa ng detalye ay nagpapaliwanag at nagbibigay ng suporta sa mga argumento ng sanaysay* ay mayroong ($M=4.70, SD=0.54$). Kahit pa napansin na *lubhang mataas* na antas ng katangian sa pagsulat, ang pahayag na may pinakamababang marka ay ang *bawat talata ay naglalaman ng iisang pangunahing ideya o punto na nagbibigay ng malinaw na*

direksyon at mayroong ($M = 4.64, SD = 0.53$).

May kabuoang mean na 4.69, standard deviation na 0.35 at ipinapakita na ang antas ng katangian sa pagsulat ng sanaysay batay sa Kohirens ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*. Ipinakita rin sa resulta na ang kakayahan ng mga mag-aaral na magamit ang kohirens sa pagsulat ay kanilang naisagawa.

Ang resulta ay nagpapakita na ang mga mag-aaral ay may kakayahang magamit ang kohirens sa pagsusulat, na nagreresulta sa isang malinaw at lohikal na pagkakasunod-sunod ng mga ideya at argumento sa kanilang mga sanaysay.



Upang makamit ang kohirens, kailangang: a) gumamit ng epektibong metodo ng debelopment o paraan ng pagpapahayag;

b) organisahin ang mga pangungusap mula sa simula hanggang sa wakas sa tulong ng epektibong patern ng organisasyon; at c) gumamit ng mge epektibo na salitang transisyunal.

Talahanayan 8

Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kawastuhan

Mga Pahayag	Mean	SD	Puna
<i>Mahalaga ang pag-iwas sa mga pagkakamali sa pagbaybay, paggamit ng mga salita, at iba pang teknikal na aspeto.</i>	4.65	0.60	Lubos na sumasang-ayon
<i>Nagpapahayag ng mga katotohanan na suportado ng mga ebidensya.</i>	4.82	0.41	Lubos na sumasang-ayon
<i>Nakapagbibigay ng malinaw na pagsusuri o opinyon batay sa katotohanan.</i>	4.79	0.45	Lubos na sumasang-ayon
<i>Nagkakaroon ng malinaw at kahanga-hangang pagsulat ng sanaysay na nagtataglay ng kahalagahan at kalidad.</i>	4.72	0.48	Lubos na sumasang-ayon
<i>Nakatutulong upang magkaroon ng balanseng pagsipat sa mga argumento at punto ng sanaysay.</i>	4.70	0.53	Lubos na sumasang-ayon

Overall Mean: 4.74

Standard Deviation: 0.35

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 8 ay naglalahad ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kawastuhan. Ito ay makikita sa baryabol na kung saan may napakahalaga sa pagsulat ng sanaysay ng mga mag-aaral. Kinakailangang may sapat na kaalaman ang mga mag-aaral sa usaping ito upang mapalalim nang husto ang kawastuhan sa pagsulat ng sanaysay. Ang talahanayang ito ay naglalaman ng mga pahayag, mean, standard deviation, at mga puna upang makuha ang Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kawastuhan.

Ang talahanayan 8 ay naglalahad ng Antas ng Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral batay sa Kawastuhan. Lumabas ang resulta na may literal na paliwanag na *lubhang mataas* na antas ng katangian sa pagsulat ng sanaysay ng mga mag-aaral batay sa kawastuhan, *nagpapahayag ng mga katotohanan na suportado ng mga ebidensya* ay nakakuha ng ($M=4.82, SD=0.41$) at ang *nakapagbibigay ng malinaw na pagsusuri o opinyon batay sa katotohanan* ay mayroong ($M=4.79, SD=0.45$). Kahit pa napansin na *lubhang mataas* na antas ng katangian sa pagsulat, ang pahayag na may pinakamababang marka ay ang *mahalaga ang pag-iwas sa mga*

pagkakamali sa pagbabaybay, paggamit ng mga salita, at iba pang teknikal na aspeto at mayroong ($M = 4.65, SD = 0.60$).

May kabuoang mean na 4.74, standard deviation na 0.35 at ipinapakita na ang antas ng katangian sa pagsulat ng sanaysay batay sa Kawastuhan ay may puna na lubos na sumasang-ayon at literal na paliwanag na *lubhang mataas*. Ipinakita rin sa resulta ang kakayahan ng mga mag-aaral na makalikha ng sanaysay sa wastong kaparaanan.

Ipinakikita sa resulta ang kakayahan ng mga mag-aaral na makalikha ng sanaysay sa wastong kaparaanan.

Antas ng Pagganap ng mga Mag-aaral batay sa Malikhaing Pagsulat

Ang talahanayan ay naglalaman ng Antas ng Pagganap ng mga Mag-aaral batay sa Malikhaing Pagsulat.

Ang talahanayan ay binubuo ng Marka, Kabuoan, Bahagdan, at Mapaglarawang Katumbas. Inilalahad nito ang Antas ng Pagganap ng mga Mag-aaral batay sa Malikhaing Pagsulat.

Talahanayan 9

Antas ng Pagganap ng mga Mag-aaral batay sa Malikhaing Pagsulat

Marka	Kabuoan	Bahagdan	Mapaglarawang Katumbas
90 - 100	47	30.62	Namumukod tangi
85 - 89	31	20.13	Lubhang Kasiya-siya
80 - 84	39	25.32	Kasiya-siya
75 - 79	13	8.44	Medo Kasiya-siya
Below 75	24	15.58	Hindi Naabot ang Inaasahan
Total	154	100	
Weighted Mean		83.31	
Pinakamababang Marka		50	
Pinakamataas na marka		98	Kasiya-siya
Standard Deviation		11.06	



Ang talahanayan 9 ay nagpapakita ng Antas ng Pagganap ng mga Mag-aaral batay sa Malikhaing Pagsulat. Sa talahanayang ito makikita ang pagganap ng mga mag-aaral sa malikhaing pagsulat ng isang sanaysay. Dito nakapaloob ang mga bahagdan na kinailangan din sa pagmamarka. Ang talahanayan 9 ay binubuo ng Marka, Kabuoan, Bahagdan, at Mapaglarawang Katumbas.

Ang talahanayan 9 ay nagpapakita ng Antas ng Pagganap ng mga Mag-aaral batay sa Malikhaing Pagsulat, sa kabuoang isang daan at limampung-apat na tagatugon, ang marka na "90 - 100" ay nakakuha ng pinakamataas na bilang na apatnaput-pito (47) o 30.62% ng kabuoang tumugon at may mapaglarawang katumbas na *Namumukod tangi*. At ang marka na "80 - 84" ay mayroong bilang na tatlumput-siyam (39) o 25.32% ng kabuoang tumugon at may mapaglarawang katumbas na *Kasiya-siya*. Habang ang marka na "75 - 79" ay nakakuha ng pinakamababang bilang na labingtatlo (13) o 8.44% ng kabuoang tumugon at may mapaglarawang katumbas na *Medo Kasiya-siya*.

May kabuoang (*Weighted Mean = 83.31, SD = 11.06*) at (*pinakamababang marka = 50, pinakamataas na marka = 98*) ipinapakita na ang antas ng pagganap ng mga mag-aaral batay sa malikhaing pagsulat ay may mapaglarawang katumbas na *Kasiya-siya*. Sa resulta ng pagganap ng mga mag-aaral ipinapakita ng resulta ng mga datos na mas marami ang nakakuha ng mataas na marka.

Ang resulta ay nagpapakita rin na mas marami ang nakakuha ng mataas na marka sa malikhaing pagsulat. Nangangahulugan lamang ito na ang mga mag-aaral ay may kakayanang mailapat ang kanilang mga kaalaman hinggil sa iba't ibang gabay at katangian sa pagsulat ng sanaysay upang mailahad nang malinaw at maayos ang kanilang mga sulatin.

Makabuluhang Kaugnayan ng Gabay at Katangian sa Pagsulat ng Sanaysay sa Pagganap ng mga Mag-aaral

Sa talahanayan ay makikita ang Makabuluhang Kaugnayan ng Gabay at Katangian sa Pagsulat ng Sanaysay sa Pagganap ng mga Mag-aaral.

Ang talahanayan ay binubuo ng Gabay at Katangian, Pagganap, P-Value, Katibayan ng Ugnayan, at Analisis.

Ang talahanayan 10 ay nagpapakita ng Makabuluhang Kaugnayan ng Gabay at Katangian sa Pagsulat ng Sanaysay sa Pagganap ng mga Mag-aaral. Dito malalaman na mahalaga ang Gabay at Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral. Nakapaloob dito ang makabuluhang pag-aaral at ginawang pagsulat ng sanaysay ng mga mag-aaral na napakahalaga sa ginawang pag-aaral ng mananaliksik sapagkat nangangahulugan na ang gabay at katangian sa pagsulat ng sanaysay ay may kabuluhan. Ang talahanayan 10 ay binubuo ng Gabay at Katangian, Pagganap, P-Value, Katibayan ng Ugnayan, at Analisis.

Talahanayan 10

Makabuluhang Kaugnayan ng Gabay at Katangian sa Pagsulat ng Sanaysay sa Pagganap ng mga Mag-aaral

		Pagganap
Malinaw	Pearson Correlation	0.34
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan
Organisado	Pearson Correlation	0.256
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan
Istruktura	Pearson Correlation	0.297
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan
Orihinalidad	Pearson Correlation	0.298
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan



Palatandaan:

Sukatán	Katibayan ng Ugnayan
±0.00	walang pagkakaugnay, Walang relasyon
±0.01 – ±0.20	napakababang pagkakaugnay, Halos walang relasyon
±0.21 – ±0.40	mababang pagkakaugnay, Tiyak ngunit mababaw ang relasyon
±0.41 – ±0.70	katamtamang pagkakaugnay, Makabuluhan ang relasyon
±0.71 – ±0.90	mataas na pagkakaugnay, Kapuna-puna ang relasyon
±0.91 – ±0.99	napakataas na pagkakaugnay, Mapapaniwalaan ang relasyon
±1.00	Lubos ang pagkakaugnay, Ganap na may relasyon

Talahanayan 10 ay nagpapakita ng makabuluhang kaugnayan ng gabay at katangian sa pagsulat ng sanaysay sa pagganap ng mga mag-aaral. Ang datos ay ginamitan ng istatistikong pamamaraan na nagresulta ng tinuos na halaga para sa *r-value*. Ipinapakita dito na ang tinuos na halaga para sa *Malinaw, Organizado, Istrukturá, at sa Orihinalidad* ay may pagkakaugnay at mayroong mababa na suportang tinuos na *p-value* at ang pagsusuri ay makabuluhan.

Batay sa datos na nakalap, ipinapakita nito na ang walang bisang palagay na “*Walang makabuluhang kaugnayan ng gabay at katangian sa pagsulat ng sanaysay sa pagganap ng mga mag-aaral*” ay hindi tinatanggap. Sa halip, ipinapakita nito na “may makabuluhang” kaugnayan sa pagitan ng gabay at katangian sa pagsulat ng sanaysay at pagganap ng mga mag-aaral.

Makabuluhang Kaugnayan ng Pamantayan sa Pagganap ng mga Mag-aaral sa Pagsulat ng Sanaysay

Sa talahanayan ay makikita ang Makabuluhang Kaugnayan ng Gabay at Katangian sa Pagsulat ng Sanaysay sa Pagganap ng mga Mag-aaral.

Ang talahanayan ay binubuo ng Pamantayan, Pagganap, P-Value, Katibayan ng Ugnayan, at Analisis.

Ang talahanayan 11 ay nagpapakita ng Makabuluhang Kaugnayan ng Pamantayan sa Pagganap ng mga Mag-aaral sa Pagsulat ng Sanaysay. Dito malalaman na mahalaga ang Gabay at Katangian sa Pagsulat ng Sanaysay ng mga Mag-aaral. Nakapaloob dito ang makabuluhang pag-aaral at ginawang pagsulat ng sanaysay ng mga mag-aaral na napakahalaga sa ginawang pag-aaral ng mananaliksik sapagkat nangangahulugan na ang pamantayan sa pagsulat ng sanaysay ay may kabuluhan. Ang talahanayan 11 ay binubuo ng Pamantayan, Pagganap, P-Value, Katibayan ng Ugnayan, at Analisis.

Talahanayan 11

Makabuluhang Kaugnayan ng Pamantayan sa Pagganap ng mga Mag-aaral sa Pagsulat ng Sanaysay

		Pagganap
Introduksyon	Pearson Correlation	0.24
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan
Kaisahan	Pearson Correlation	0.337
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan
Kohirens	Pearson Correlation	0.289
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan
Kawastuhan	Pearson Correlation	0.365
	Sig. (2-tailed)	.000
	N	153
	Strength	Mababang pagkakaugnay
	Analysis	Makabuluhan

Palatandaan:

Sukatán	Katibayan ng Ugnayan
±0.00	walang pagkakaugnay, Walang relasyon
±0.01 – ±0.20	napakababang pagkakaugnay, Halos walang relasyon
±0.21 – ±0.40	mababang pagkakaugnay, Tiyak ngunit mababaw ang relasyon



$\pm 0.41 - \pm 0.70$	katamtamang pagkakaugnay, Makabuluhan ang relasyon
$\pm 0.71 - \pm 0.90$	mataas na pagkakaugnay, Kapuna-puna ang relasyon
$\pm 0.91 - \pm 0.99$	napakataas na pagkakaugnay, Mapapaniwalaan ang relasyon
± 1.00	Lubos ang pagkakaugnay, Ganap na may relasyon

Talahanayan 11 ay nagpapakita ng makabuluhang kaugnayan ng pamantayan sa pagganap ng mga mag-aaral sa pagsulat ng sanaysay. Ang datos ay ginamitan ng istatistikong pamamaraan na nagresulta ng tinuos na halaga para sa *r-value*. Ipinapakita dito na ang tinuos na halaga para sa *Introduksyon, Kaisahan, Kohirens, at sa Kawastuhan* ay may pagkakaugnay at mayroong mababa na suportang tinuos na *p-value* at ang pagsusuri ay makabuluhan.

Batay sa datos na nakalap, ipinapakita nito na ang walang bisang palagay na “*Walang makabuluhang kaugnayan ng pamantayan sa pagganap ng mga mag-aaral sa pagsulat ng sanaysay*” ay hindi tinatanggap. Sa halip, ipinapakita na “may makabuluhang” kaugnayan sa pagitan ng pamantayan sa pagganap ng mga mag-aaral at pagsulat ng sanaysay.

Planong gawain na nais imungkahi matapos ang pag-aanalisa ng pag-aaral

Ang pag-aaral na ito ay nagpapakita ng planong gawain na nais imungkahi matapos ang pag-aanalisa ng pag-aaral.

Dito makikita ang isang Pang-mag-aaral na Manwal na makatutulong sa mga mag-aaral sa malikhaing pagsulat.

Pang-Mag-aaral na Manwal sa Pagsulat ng Malikhaing Sanaysay

Kabuoang Layunin

Ang manwal na ito ay binubuo ng mga sumusunod na layunin:

1. Matugunan ang mga pangangailangan ng mga mag-aaral ukol sa mga impormasyon kaugnay sa mga gabay at katangian sa pagsulat ng sanaysay.
2. Maidetalyeng mabuti ang mga nakapaloob sa mga gabay at katangian sa pagsulat ng sanaysay na magpapalawak sa kaalaman ng mga mag-aaral.
3. Makatulong at maging patnubay sa mga mag-aaral upang makapagsagawa ng malikhaing sanaysay.

Tungkol saan ang manwal na ito?

Ang manwal na ito ay inilimbag upang matugunan ang pangangailangan ng mga mag-aaral sa ika-labing isang baitang sa Senior High School. Ang manwal na ito ay kinapalolooban ng mga Gabay at Katangian sa Pagsulat ng Sanaysay. Nawa’y lubos na makatulong ang manwal na ito sa mga mag-aaral sa Senior High School lalo na sa mga nasa ika-labing isang baitang.

Matugunan nawa nito ang pangangailangan ng mga mag-aaral at nawa’y makatulong ang manwal na ito sa kakayahang pang-unawa at pagkatuto ng mga mag-aaral.

Gabay sa Pagsulat ng Sanaysay

Ang Gabay sa Pagsulat ng Sanaysay ay isang tulong o pagsasanay na naglalayong gabayan ang mga manunulat sa pagsulat ng mga sanaysay. Ito ay nagbibigay ng mga

impormasyon, estratehiya, at mga hakbang na maaaring sundan upang maging epektibo sa pagsulat ng sanaysay.

Ang Gabay sa Pagsulat ng Sanaysay ay maaaring maglaman ng mga patnubay sa pagpili ng isang Magandang paksa, pagbuo ng maayos na introduksyon, pagkakasunod-sunod ng mga ideya, at pagbibigay ng malakas na konklusyon. Maaari rin itong magbigay ng mga halimbawa at pagsasanay upang matulungan ang mga manunulat na maunawaan ang mga konsepto at maipahayag ang kanilang mga ideya sa isang malinaw at epektibong pamamaraan.

Ang Gabay sa Pagsulat ng Sanaysay ay isang mahalagang sangkap sa pag-unlad ng mga kasanayan sa pagsulat ng mga indibidwal. Ito ay maaaring gamitin bilang isang mapagkukunan ng impormasyon at gabay upang mapabuti ang kakayahan sa pagsulat ng sanaysay.

Narito ang isang halimbawa ng isang pang-mag-aaral na manwal tungkol sa “Gabay sa Pagsulat ng Sanaysay” batay sa Malinaw, Organizado, Istruktura, at Orihinalidad:

A. Malinaw

- Magsimula sa malinaw na pagsasaad ng iyong paksa o layunin sa sanaysay.
- Iwasan ang labis na komplikadong mga pangungusap at gumamit ng malinaw at tuwid na mga salita.
- Magbigay ng mga halimbawa o detalye upang mas maipaliwanag ang iyong mga ideya.

B. Organizado

- Magkaroon ng maayos na pagkakasund-sunod ng mga ideya at argumento.
- Gamitin ang mga transitional devices tulad ng “sa una, sa ikalawa, sa huli” upang magbigay ng malinaw na pagkakasunod-sunod.
- Maglagay ng mga subheading o mga numero upang magbigay ng organisasyon sa iyong sanaysay.

C. Istruktura

- Sundin ang tradisyunal na istruktura ng sanaysay: introduksyon, katawan, at konklusyon.
- Sa introduksyon, ipakilala ang paksa at magbigay ng isang maikling pagsusuri ng mga ideya na iyong tatalakayin.
- Sa katawan, magbigay ng mga detalye, mga halimbawa, at mga argumento upang suportahan ang iyong mga punto.
- Sa konklusyon, ibalik ang iyong mga pangunahing punto at magbigay ng isang malinaw na pagtatapos sa iyong sanaysay.

D. Orihinalidad

- Maging malikhain at magbigay ng sariling perspektiba sa iyong pagsulat.



- Iwasan ang pagkopya o pagpapa-plagiarize ng mga ideya ng iba.
- Magsagawa ng sariling pananaliksik o pagsusuri upang magkaroon ng orihinal na mga ideya.

Katangian sa Pagsulat ng Sanaysay

Ang mga Katangian sa Pagsulat ng Sanaysay ay mga aspeto o mga bahagi ng pagsulat ng sanaysay na dapat bigyang pansin at maunawaan ng isang manunulat. Ang mga ito ay naglalayong magbigay ng gabay at pamantayan sa pagsulat ng isang epektibong sanaysay.

Ang mga katangiang ito tulad ng Introduksyon, Kaisahan, Kohirens, at Kawastuhan ay nagbibigay ng estruktura at organisasyon sa isang sanaysay. Ang Introduksyon ay naglalayong magbigay ng isang malikhain at kapana-panabik na pagsisimula upang maakit ang mga mambabasa, Ang Kaisahan ay nagtitiyak na may maayos at malinaw na pagkakasunod-sunod ng mga ideya at argumento. Ang Kohirens ay nagpapakita ng magandang pagkakabagay ng mga ideya at argumento sa buong sanaysay. At ang Kawastuhan ay nagpapahalaga sa tamang paggamit ng mga salita at gramatika upang maging malinis at wasto ang pagsulat.

Ang mga katangiang ito ay mahalaga dahil nagbibigay ito ng kaayusan at kahulugan sa isang sanaysay. Sa pamamagitan ng pagsunod sa mga katangiang ito, mas nagiging malinaw at madaling maunawaan ng mga mambabasa ang mga ideya at argumento nan ais ipahayag ng manunulat. Ito rin ay nagbibigay ng propesyonalidad at kredibilidad sa pagsulat ng sanaysay.

Sa pangkalahatan, ang pag-unawa at pagsunod sa mga katangian sa pagsulat ng sanaysay ay mahalaga upang makabuo ng isang epektibong sanaysay na may malinaw na layunin at malakas na impluwensiya sa mga mambabasa.

Narito ang isang halimbawa ng mga katangian sa pagsulat ng sanaysay batay sa Introduksyon, Kaisahan, Kohirens, at Kawastuhan:

A. Introduksyon

- Magsimula sa isang malikhain at kapana-panabik na pagsisimula upang maakit ang mga mambabasa.
- Ipakilala ang iyong paksa at magbigay ng isang maikling pagsusuri ng mga ideya o isyu na iyong tatalakayin sa sanaysay.
- Maglagay ng isang malinaw na thesis statement na naglalaman ng iyong pangunahing punto o argumento.

B. Kaisahan

- Magkaroon ng maayos at malinaw na pagkakasunod-sunod ng mga ideya at argumento.
- Maglagay ng mga transitional devices o mga pang-ugnay na salita upang magbigay ng magandang daloy sa iyong pagsulat.
- Siguraduhing ang bawat talata ay may kaugnayan sa pangunahing paksa o argumento ng sanaysay.

C. Kohirens

- Magkaroon ng Magandang pagkakabagay ng mga ideya at argumento sa loob ng buong sanaysay.
- Iwasan ang mga salitang walang kabuluhan o mga pahayag na hindi konektado sa pangunahing paksa.
- Gamitin ang mga pang-ugnay at mga transitional devices upang maiugnay ang mga ideya at argumento sa loob ng sanaysay.

D. Kawastuhan

- Maging maingat sa paggamit ng tama at wastong mga salita at gramatika.
- Iwasan ang mga pagkakamali sa pagbabaybay, paggamit ng mga salitang hindi tamang tayming, o maling pagkakasunod-sunod ng mga pangungusap.
- Mag-rebyu at mag-edit ng iyong sanaysay upang matiyak na malinis at wasto ang iyong pagsulat.

Sa larangan ng akademikong pagsulat, mahalaga ang paggamit ng manwal ng mga mag-aaral. Ito ay nagbibigay ng mga gabay at patakaran sa mga mag-aaral upang matutunan ang mga tamang pamamaraan at pamantayan sa pagsulat. Sa pamamagitan ng manwal na ito, ang mga mag-aaral ay matututong sumunod sa mga istruktura at pormat ng akademikong pagsulat, kabilang ang tamang paggamit ng mga sanggunian, pormat ng papel, at iba pang mga teknikal na aspeto sa pagsulat. Bukod pa rito, ito rin ay nagbibigay ng kahalagahan sa pagiging responsable at propesyonal sa larangan ng pagsulat, na siyang magpapalakas sa kanilang kakayahan bilang isang manunulat.

4. KONKLUSYON AT REKOMENDASYON

Base sa inilalahad na resulta ng pananaliksik, ang mga konklusyon na sumusunod ay nabuo.

1. Ipinapakita na “may makabuluhang” kaugnayan sa pagitan ng gabay at katangian sa pagsulat ng sanaysay kung kaya’t ang haypotesis sa unang kabanata na “walang makabuluhang kaugnayan” ang mga ito ay huwag tanggapin. Nagpapatunay lamang na ang gabay at katangian ay nakatutulong sa pagsulat ng sanaysay.
2. Ipinapakita nito na “may makabuluhang” kaugnayan sa pagitan ng pamantayan at pagganap ng mga mag-aaral sa pagsulat ng sanaysay kung kaya’t ang haypotesis sa unang kabanata na “walang makabuluhang kaugnayan” ang mga ito ay huwag tanggapin. Lumabas sa pag-aaral na nakatutulong ang pamantayan sa malikhaing pagsulat.

Batay sa resulta at konklusyon sa pagsusuri, ang mga sumusunod ang rekomendasyon sa pag-aaral:

1. Sa mga guro ng mga mag-aaral sa asignaturang Filipino, maaaring ipagpatuloy ang magandang simulain sa pagbuo ng mga kagamitang pampagtuturo na maaaring makahikayat sa mga mag-aaral upang patuloy na magsanay sa paggamit ng wikang Filipino.
2. Para sa mga School Head, maaaring maglunsad ng iba’t ibang seminar o workshop para sa mga mag-aaral upang lalong mahasa ang kanilang kakayahan sa pagsulat at lalong mapalawak ang kaalaman.
3. Sa mga mananaliksik sa hinaharap, maaari pang susugan ang pag-aaral na ito upang makapaglunsad ng iba’t ibang



teknik o dulog na lalong magpapaunlad sa kakayanan sa pagganap ng mga mag-aaral sa malikhaing pagsulat.

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EXTENT OF IMPLEMENTATION OF CHILD PROTECTION POLICY: A BASIS FOR PROGRAM ENHANCEMENT PLAN

An Zelrad Castillo Ramos

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study sought to answer the following questions: What is the profile of the school; What is the extent of the school's administrator and teachers' awareness of the child protection policy of public and private secondary schools; What is the extent of the school's administrator and teachers' awareness of the child protection policy of public and private secondary schools; Do the awareness of respondents on child protection policy have a significant difference when they are grouped in profile? Does the awareness of school heads and teachers in child protection policy have a significant relationship in its implementation?

The descriptive method is used in the study to determine the extent of implementation of child protection policy in selected public and private secondary schools in Division of Cabuyao as a basis for program enhancement plan. The primary respondents of the study are the teachers, and school heads in the selected public and private secondary schools in the Division of Cabuyao. The total population was 585, and 233 teachers along with their school heads served as the respondents of the study.

The extent of awareness among the school's administrators and teachers regarding the Child Protection Policy in terms of institutional policy, children's rights, and duties and responsibilities of stakeholders was High. The extent of implementation of child protection policy in terms of collaborative efforts of committees, core approaches, behavior change, and change in outcomes was High.

The study shows that respondent's awareness of child protection policy had no significant difference when grouped in profile. Thus, the hypothesis stating that "there is no significant difference in the respondents' awareness of the child protection policy when they are grouped according to profile" was accepted. On the other hand, the extent of awareness of child protection policy among school heads and teachers had a significant relationship with its implementation. Thus, the hypothesis "there is no significant relationship between the extent of awareness of child protection policy among school heads and teachers and its extent of implementation" was rejected.

It is therefore recommended that students, teachers, and parents should be surveyed on a regular basis by policy schools in order to get feedback on the policies and identify areas for improvement. They should also facilitate open communication channels for students to report concerns confidentially. The Child Protection Policy (CPP) committees should assess its effectiveness through data analysis and collaboration with external child protection experts. To improve child protection measures, future researchers should be involved in the policy creation process. They should also look at the difficulties in putting the CPP into practice in their individual districts or divisions.

KEYWORDS: Implementation; child protection policy; enhancement

1. INTRODUCTION

"Every child has the right to go to school and learn, free from fear." – UNICEF

According to World Vision's Child Protection Theory of Change, the goal of Child Protection is "to strengthen the protection of children from abuse, neglect, exploitation and other forms of violence." In recent years, the issue of child protection has gained significant attention globally. Ensuring the safety and well-being of children in educational institutions is a matter of utmost importance. Schools, as the nurturing grounds for future citizens, play a vital role in safeguarding children against various forms of abuse, neglect, and exploitation. The Child Protection Committee is given instructions and standards by the Child Protection Policy to establish a safe and secure learning environment. It is a tool that safeguards students and staff at schools by outlining the plans and procedures for child safety and by modeling dependable behavior in this regard, Matulac & Zamora (2020). In order to provide a safe and secure learning environment, the Child Protection Committee is given instructions and rules by the Child Protection Policy. By outlining the plans and procedures

for child safety and modeling a consistent approach to child safety, it serves as a tool that safeguards students and school staff. The significance of the school's role in CPP implementation cannot be overstated, as it involves compliance with established policies and a proactive commitment to fostering an atmosphere that prioritizes the well-being of every child.

Moreover, schools serve as the conduits for disseminating information about Child Protection Policies to all stakeholders, including teachers, students, parents, and support staff. The school needs to ensure that everyone is well-informed about the policy's provisions, procedures, and the collective responsibility in creating a protective environment. The school is responsible for organizing training sessions and workshops to build the capacity of educators and staff to recognize signs of abuse, understand reporting protocols, and implement preventive measures.

Furthermore, child protection is the role of every governmental and non-governmental organization, community, school, and



even church that agrees with the state policy provisions. Giving special protection and defending children's rights is one of the major concerns of the state. This advocacy nationally and internationally promoted and recognized to stop violence and promote peace, welfare, and harmony. Towards this advocacy, the Department of Education (DepEd) has adopted a program titled "DepEd Child Protection Policy" under DepEd Order 40, s. 2012, to ensure that children are protected and not neglected. On the other hand, as part of the child protection policy, concrete measures pertaining to anti-bullying were also promulgated under R.A 10627, section 7 (2013), the implementing rules and regulations which the DepEd issued in 2014 for the implementation of the law of child protection.

Hence, DepEd has recognized violence, abuse, and aggressors as present in society and schools and may arise due to the pressure and adversities confronted by the teachers and other officials as front liners within and outside the school. However, most students were subjected to this kind of scenario with a compelling responsibility to do well and avoid inappropriate conduct inside or outside the school. The problem of misbehavior is expected but can be prevented through a policy that reminds everyone of the responsibilities and prohibitions of bad actions and intentions that the department extensively discourages. For that reason, DepEd reiterated a zero-tolerance policy for any act of abuse, exploitation, violence, discrimination, bullying, and the like through the implementation of the Child Protection Policy.

Therefore, the protection of children within educational settings is a cornerstone of a society's commitment to nurturing a safe and conducive learning environment. In the Division of Cabuyao, the implementation of Child Protection Policies (CPP) in secondary schools plays a pivotal role in safeguarding the well-being of students.

This research aims to comprehensively examine the extent of the implementation of CPP within selected public and private secondary schools in the Division of Cabuyao. By assessing the current status of CPP practices, this study seeks to provide a nuanced understanding of the strengths and areas requiring improvement. The findings from this research will serve as a critical foundation for the development of a Program Enhancement Plan, ensuring that the child protection framework is not only present but also effective in addressing the unique challenges faced by students in Cabuyao. As the safety and development of students remain paramount, this investigation endeavors to contribute meaningful insights that can guide policy revisions, enhance existing programs, and fortify the commitment to creating a secure educational environment for the youth in Cabuyao.

1.1 Statement of the Problem

Specifically, this study seeks to answer the following questions:

1. What is the profile of the school in terms of:
 - 1.1 size of School;
 - 1.2 type of School; and,
 - 1.3 type of Respondent?

2. What is the level of the school's administrator & teachers' awareness of the child protection policy of public and private secondary schools in terms of:

- 2.1. institutional policy;
- 2.2. children's rights; and,
- 2.3 duties and responsibilities of stakeholders?

3. What is the extent of implementation of the Child Protection Policy in selected public and private secondary schools in the Division of Cabuyao in terms of:

- 3.1 collaborative efforts of committees;
- 3.2 core approaches;
- 3.3 change in behavior; and,
- 3.4 change in outcomes?

4. Is there a significant difference on the respondents' awareness of the child protection policy when they are grouped according to profile?

5. Is there a significant relationship between the extent of awareness of child protection policy among school heads and teachers and its extent of implementation?

2. METHODOLOGY

The researcher adopted Descriptive design under the Quantitative method of research. Nassaji (2015) also states that the goal of descriptive research is drawing and classifying the phenomenon. It is applied because it is an approach that is used in exploring and understanding the meaning of individuals or groups ascribed to a social or human problem (Creswell, 2014). This type of research design is often associated with Anthropology, Sociology, and Psychology, as well as, in the field of Education. The objective of this research is to determine the extent of implementation of child protection policy in selected public and private secondary schools in Division of Cabuyao as a basis of program enhancement plan.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions determined the extent of administrator's awareness and implementation of child protection policy.

Profile of the School

Profile of the school comprises size of school, type of school, and type of Respondents and was described by frequency and percentage.

The profile of the school in terms of size indicates that among the seven schools surveyed, 12.88% are categorized as small, 5.15% as medium, 48.07% as large, and 33.91% as very large. This distribution provides insight into the range of school sizes represented in the study sample, with a significant portion falling into the large and very large categories.

This data clarifies the range of school sizes in the research sample. One noteworthy discovery is that a significant percentage of the schools—48.07 percent and 33.91% of the

sample, respectively—fit into the large and very large categories.

This distribution, which shows a mix of smaller and larger educational institutions, highlights the range of school sizes considered in the study. Understanding the distribution of educational institutions and their characteristics within a particular setting or study location can be improved by such insights into school size profiles.

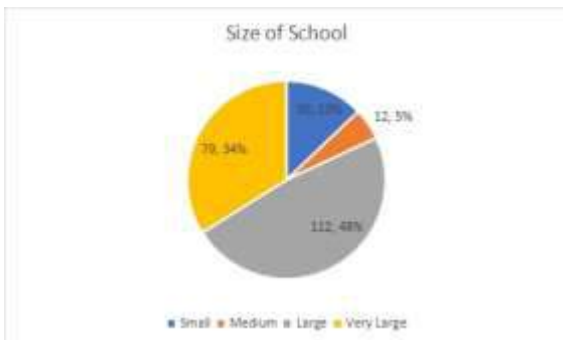


Figure 1. Profile of the School in Terms of Size of School

This shows moderate implementation of the policy, emphasizing the need for consistent enforcement of the child protection across all education institution.

Therefore, regardless of the size, schools must enforce child safety rules to keep ensure the safety and well-being of students in educational setting.

The profile of the school in terms of type of school indicates that among seven schools surveyed, 73.39% are categorized as public schools, and 26.61% as private. This distribution provides insight into the range of school types represented.

Figure 2 shows the school profile in terms of the type of school which is categorized as public and private.

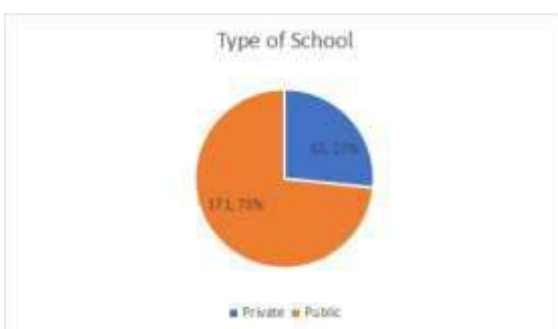


Figure 2. Profile of The School in Terms of Type of School

Such measures are essential for promoting a safe and supportive environment for students while ensuring that educators have the necessary resources and support to effectively implement child protection measures.

Thus, implementation of the policy is are essential for promoting safe and supportive environment for students in both public and private schools while ensuring that educators have the resources and assistance they need to effectively implement the policy.

Figure 3 shows the profile of the school in terms of type respondents which categorized as Teacher and School Head.

The profile of the school in terms of type of respondents indicates that among 233 respondents surveyed 4% of respondents are categorized as School Heads and 96% of respondents are categorized as Teachers.

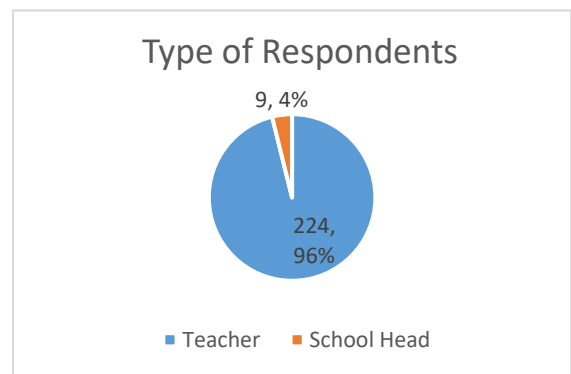


Figure 3. Profile of The School in Terms of Type of Respondents

Although the result shows that the majority of respondents are teachers, both are crucial for creating a safe and nurturing environment for students. Teachers who are informed can see abuse indicators, react appropriately, and help students who are in need. Meanwhile, school heads must be knowledgeable in order to supervise the application of policies, supply required resources, and cultivate a culture of safety within the school community.

Thus, cooperation between principals and teachers ensures the safety and well-being of all pupils by increasing the efficacy of child protection measures.

Extent Awareness of the Child Protection Policy

The extent of awareness of the school administrator and teachers on the child protection policy of public and private secondary schools includes institution policy, children's rights, duties, and responsibilities of stakeholders and was determined by mean and standard deviation.

In conclusion, the survey results highlight a clear distribution among respondents, with 4% being School Heads and the vast majority, 96%, being Teachers. This breakdown emphasizes the predominant role of teachers in the surveyed schools and suggests a focus on their perspectives and experiences when considering educational policies and practices.



Table 1. Extent of the School’s Administrator & Teachers’ Awareness of the Child Protection Policy in terms of Institutional Policy

Statements	Mean	SD	Remarks
1. I am aware of the protocols for reporting issues about child protection.	4.47	0.72	Strongly Agree
2. I've had enough professional development and training on child protection policies.	4.02	0.85	Agree
3. I feel confident in my understanding of the child protection policy.	4.17	0.78	Agree
4. I am knowledgeable about the main elements of the child protection policy, such as the training, confidentiality, and reporting processes.	4.11	0.80	Agree
5. I am aware that the information-dissemination mechanisms related to child protection policy in our school are clear and easily accessible.	4.19	0.76	Agree
<i>Overall Mean = 4.19 Standard Deviation = 0.80 Verbal Interpretation = High</i>			

Table 1 represents the extent of awareness among the school's administrators and teachers regarding the Child Protection Policy. The general mean was 4.19 with verbal interpretation as High and a standard deviation of 0.81 indicates the high level of schools’ administrators and teachers’ awareness and understanding on the child protection policy. Moreover, the indicator “*Teachers and administrators are aware of the protocols for reporting issues about child protection*” gleaned as the highest generated mean of 4.47 and interpreted as Strongly Agree. Meanwhile, indicator “*Educators and School Heads had enough professional development and training on child protection policies*” gained the least mean of 4.02 and interpreted as Agree. This implies that the respondents demonstrate understanding of the child protection policy. It means that the school’s administrators and teachers have keen understanding of the protection that every child needs inside and outside the school.

This means that the DepEd Child Protection Policy is essential for evaluating its effectiveness in safeguarding children's rights within schools. This involves regularly assessing how well schools are adhering to the policy guidelines, identifying any gaps or challenges in implementation, and taking corrective actions as necessary. It emphasizes the importance it is to put the DepEd Child Protection Policy into practice in order to address concerns about child protection in both public and private educational institutions. In order to protect children, it emphasizes the need of closely observing how the policy is being implemented in schools and assess the tools and assistance that teachers have at their discretion.

In conclusion, education authorities can ensure that child protection measures are consistently applied and that any issues are promptly addressed to prevent harm to students. Lastly, to support the welfare of the students, both public and private schools must ensure that their teachers receive adequate training in child protection policies as well as professional development.

Table 2. Extent of the School’s Administrator & Teachers’ Awareness of the Child Protection Policy in terms of Children’s Rights

Statements	Mean	SD	Remarks
6. I am aware of the rights of the child as stated in the child protection policy of the school.	4.44	0.65	Strongly Agree
7. I am aware of how the school actively implements and upholds the child's rights.	4.36	0.66	Strongly Agree
8. I understand the role of teachers and administrators in safeguarding and promoting the child's rights.	4.48	0.66	Strongly Agree
9. I am informed of the protocols for reporting abuses against minors.	4.33	0.70	Strongly Agree
10. I incorporate principles of child’s rights into my teaching practices	4.37	0.68	Strongly Agree
<i>Overall Mean = 4.40 Standard Deviation = 0.67 Verbal Interpretation = Very High</i>			

Table 2 indicates a high level of awareness among the school's administrators and teachers regarding the Child Protection Policy and Children's Rights.

Indicator “*Teachers and administrators understand the role of teachers and administrators in safeguarding and promoting the child's rights*” gleaned the highest mean of 4.48 and Standard Deviation of 0.66, and was interpreted as Strongly Agree. However, indicator “*Educators and School Heads are informed*



of the protocols for reporting abuses against minors” garnered the least mean of 4.33 and Standard Deviation of 0.70 and interpreted as Strongly Agree. Thus, the overall mean of 4.40 and a low standard deviation of 0.67 affirm a very high collective awareness and alignment within the school community. These findings suggest a solid foundation for the effective implementation of the policy and the promotion of children's rights within the school.

Thus, the provided result indicates that there is a basic level of awareness among educators and school heads regarding the protocols for reporting child abuse. However, this might not necessarily imply effective implementation or a thorough understanding of these protocols. To improve the situation, it is crucial to provide comprehensive training, regular updates, and support for educators and school heads to ensure they can efficiently identify, report, and address abuse cases involving minors. This will ultimately contribute to a safer and more protective environment for children in educational institutions.

Table 3. Extent of the School’s Administrator & Teachers’ Awareness of The Child Protection in terms of Duties and Responsibilities of Stakeholders

Statements	Mean	SD	Remarks
11. I am familiar with the specific duties and responsibilities of stakeholders outlined in the child protection policy.	4.29	0.74	Strongly Agree
12. I understand the collaborative efforts required among stakeholders to ensure the well-being of the students.	4.23	0.75	Strongly Agree
13. I have received training on my specific duties and responsibilities outlined in the child protection policy.	3.98	0.89	Agree
14. I am aware that the school provides adequate support and resources to help stakeholders fulfill their roles in child protection.	4.18	0.78	Agree
15. I am aware that the school fosters an environment that encourages open communication among stakeholders regarding child protection.	4.27	0.78	Strongly Agree
<i>Overall Mean = 4.19 Standard Deviation = 0.80 Verbal Interpretation = High</i>			

Table 3 indicates a high level of awareness among the school's administrators and teachers regarding the Child Protection Policy in terms of the duties and responsibilities of stakeholders. Indicator “*Teachers and administrators are familiar with the specific duties and responsibilities of stakeholders outlined in the child protection policy*” garnered the highest mean of 4.29 with a standard deviation of 0.74 and interpreted as Strongly Agree. On the other hand, the indicator, “*Respondents have received training on my specific duties and responsibilities outlined in the child protection policy*” gleaned the least mean of 3.98 with standard deviation of 0.89 with the interpretation of Agree. Hence, the overall mean of 4.19 and a standard deviation of 0.80 indicate a high collective awareness and alignment within the school community regarding the duties and responsibilities of stakeholders in child protection. The data suggests a positive foundation for the effective collaboration and implementation of the Child Protection Policy within the school. The given result indicates that the school's Child Protection Policy is showing promising signs of successful integration and teamwork among its stakeholders. This positive foundation implies that the policy is being

effectively executed, ensuring a safer environment for children, and fostering a strong sense of responsibility between stakeholders and school’s personnel.

In conclusion, the school not only exceeds the expectations of some stakeholders, but it also shows an excellent capacity to create and develop a setting that is full of aspects or components that actively support the intended objectives and results of the learning environment. In doing so, it establishes itself as a beacon of academic achievement and a model for fostering optimal learning environments. Therefore, through the implementation of child protection measures and a focus on student well-being, the school establishes a standard for excellence that goes beyond academic achievement.

Extent of Implementation of The Child Protection Policy

The Extent of implementation of the child protection policy in selected public and private secondary schools includes collaborative efforts of committees, core approaches, change in behavior, and change in outcomes and was determined by mean and standard deviation.

Table 4. Extent of Implementation of the Child Protection Policy in terms of Collaborative Efforts of Committees

Statements	Mean	SD	Remarks
1. The child protection policy is well-understood and communicated inside the school by our committee.	4.22	0.84	Strongly Agree
2. There is effective coordination and communication within my committee and with other committees involved in child protection	4.14	0.77	Agree



3. The committees collaborate effectively to address child protection issues comprehensively.	4.19	0.83	Agree
4. The school supports ongoing training to enhance our capabilities in ensuring child protection.	4.12	0.84	Agree
5. Our committee actively takes part in putting the policy's child protection measures into practice.	4.15	0.79	Agree
<i>Overall Mean = 4.17 Standard Deviation = 0.81 Verbal Interpretation = High</i>			

Table 4 depicts the extent of implementation of the Child Protection Policy in terms of collaborative efforts among committees within the school.

Indicator “The child protection policy is well-understood and communicated inside the school by our committee” gained the highest generated mean of 4.22 with a standard deviation of 0.84, which is interpreted as Strongly Agree. While indicator “The school supports ongoing training to enhance our capabilities in ensuring child protection” generates a weighted mean of 4.12 and a standard deviation of 0.84, which means Agree. Hence, the overall mean of 4.17 and the standard deviation of 0.81 indicate a high level of administrator and searchers on the implementation of child protection policy. This means that a proactive approach used by the committee members in translating policy guidelines into practical actions within the school ensure a holistic well-being of the students.

This denotes that the school's Child Protection Policy is effectively communicated by the committee, demonstrates a strong commitment to ensuring the well-being and safety of all students. By promoting understanding and awareness of the policy among staff and students, the committee plays a vital role in fostering a secure and nurturing learning environment, where everyone is empowered to address and report any concerns related to child protection. Therefore, the Committee's ability to effectively administer policies reflects their organizational competence and leadership skills. They demonstrate a keen understanding of the details involved in policy implementation, including communication, monitoring, and evaluation. This not only ensures that policies are properly enforced but also allows for adjustments and improvements based on feedback and evolving needs. The committee's proficiency in administering policies underscores their organizational prowess and adept leadership capabilities.

Table 5. Extent of Implementation of The Child Protection Policy in Terms of Core Approaches

Statements	Mean	SD	Remarks
1. There is a high level of awareness among students and staff regarding child protection issues.	4.16	0.83	Agree
2. Our school emphasizes proactive measures to prevent child protection issues	4.21	0.77	Strongly Agree
3. There are effective early intervention strategies in place for potential child protection concerns.	4.14	0.82	Agree
4. Our school actively involves parents in discussions and activities related to child protection.	4.18	0.83	Agree
5. There is a strong support system for students and staff who may be affected by child protection issues.	4.22	0.79	Strongly Agree
<i>Overall Mean = 4.18 Standard Deviation = 0.81 Verbal Interpretation = High</i>			

The data from Table 5 reveals a high level of implementation of the Child Protection Policy in terms of core approaches within the school.

Participants generally agreed that there is a high level of awareness among students and staff regarding child protection issues. Indicator “There is a strong support system for students and staff who may be affected by child protection issues” generated the highest mean of 4.22 with SD of 0.79 which was interpreted as Strongly Agree. Meanwhile, indicator “There are effective early intervention strategies in place for potential child protection concerns” gained the least weighted mean of 4.14 with SD of 0.83 with an interpretation of Agree. Hence, the overall mean of 4.18 and a SD of 0.81 suggest a high level of consensus and effectiveness in implementing core

approaches to child protection within the school. The results indicate that the school has established a comprehensive and proactive framework addressing awareness, prevention, early intervention, parental involvement, and support systems, contributing to a high overall rating in the Verbal Interpretation as High.

The analysis demonstrates a strong agreement among stakeholders regarding the school's effective implementation of core child protection strategies. The school has successfully developed a robust and forward-thinking approach, these comprehensive measures indicate the school's commitment to ensuring a safe and nurturing environment for its students.



Overall, the school's success in implementing core approaches to child protection can be attributed to its unwavering commitment to creating a safe and nurturing environment for its students. Through the consideration of multiple factors like awareness, prevention, early intervention, parental

participation, and support networks, the school exhibits a comprehensive approach to ensuring the safety and well-being of students. Students can flourish intellectually, socially, and emotionally as a result of feeling they are respected, safe, and supported by their school community.

Table 6. Extent of Implementation of The Child Protection Policy in Terms of Change in Behavior

Statements	Mean	SD	Remarks
1. There have been positive changes in student behavior since the implementation of child protection policies	4.06	0.95	Agree
2. Parents are actively involved in promoting positive behavior related to child protection at home.	4.01	0.92	Agree
3. The school has effectively engaged parents in discussions on child protection issues.	4.15	0.86	Agree
4. There is a noticeable shift in attitudes and behaviors in school culture that align with the principles of child protection.	4.06	0.86	Agree
5. The implementation of child protection policies has contributed to a positive and respectful school culture.	4.06	0.88	Agree
<i>Overall Mean = 4.07</i>		<i>Standard Deviation = 0.89</i>	<i>Verbal Interpretation = High</i>

The data from Table 6 indicates a high level of implementation of the Child Protection Policy in terms of the change in behavior within the school community.

The results show that indicator “The school has effectively engaged parents in discussions on child protection issues” with generated the highest mean of 4.15 and interpreted as Agree. Meanwhile, indicator “Parents are actively involved in promoting positive behavior related to child protection at home” gained the lowest mean of 4.01 which is also interpreted as Agree. Therefore, the overall mean of 4.07 and a standard deviation of 0.89 suggest a high level of consensus and effectiveness in implementing child protection policies to bring about positive changes in behavior within the school. The Verbal Interpretation as "High" further supports the notion that the policies have contributed significantly to fostering a positive and respectful school culture while positively impacting both student and parental behavior.

When parents are actively participating in their children's education and fostering strong relationships with school staff, parents can significantly contribute to the success of child

protection policies and create a more supportive and collaborative school environment. Furthermore, this collaborative effort between parents and society ensures that children not only develop a solid awareness of child safety principles but also grow into resilient and well-rounded individuals capable of thriving in diverse environments. Thus, by prioritizing active participation in their children's upbringing, parents contribute significantly to the well-being and development of future generations

In conclusion, collaborative effort between parents and society ensures that children not only develop a solid awareness of child safety principles but also grow into resilient and well-rounded individuals capable of thriving in diverse environments. Thus, by prioritizing active participation in their children's upbringing, parents contribute significantly to the well-being and development of future generations. Lastly, by actively participating in their children's upbringing, parents contribute immensely to creating a nurturing environment where children can thrive and grow into well-rounded individuals capable of navigating diverse challenges.

Table 7. Extent of Implementation of The Child Protection Policy in Terms of Change in Outcomes

Statements	Mean	SD	Remarks
1. The school has effectively engaged parents in discussions on child protection issues.	4.10	0.88	Agree
2. There is a noticeable improvement in the overall collaboration between school stakeholders.	4.04	0.82	Agree
3. The child protection policies have enhanced the overall safety and security of students within the school premises.	4.18	0.81	Agree
4. There is a sense of security and trust among students, staff, and parents due to child protection measures.	4.14	0.86	Agree
5. The implementation of child protection policies has positively impacted communication and collaboration among teachers, students, and parents.	4.14	0.86	Agree
<i>Overall Mean = 4.12</i>		<i>Standard Deviation = 0.84</i>	<i>Verbal Interpretation = High</i>



The data from Table 7 reveals a high level of implementation of the Child Protection Policy in terms of the change in outcomes within the school.

Indicator “*The child protection policies have enhanced the overall safety and security of students within the school premises*” generated the highest mean of 4.18 and SD of 0.81 interpreted as Agree. Meanwhile, “*There is a noticeable improvement in the overall collaboration between school stakeholders*” gained the least weighted mean of 4.04 with SD of 0.82 interpreted as Agree. The overall mean of 4.12 and a standard deviation of 0.84 suggest a high level of consensus and effectiveness in implementing child protection policies, resulting in positive outcomes within the school. The Verbal Interpretation as High further emphasizes that these policies have contributed significantly to improved collaboration, safety, and communication, fostering a sense of security and trust among the school community.

In line with these results, a report about the Status of Implementation of the Dep-Ed Child Protection Policy in Castillejos National High School, the study found that CNHS

adopted the Child Protection Plan (CPP) for student protection, with well-advocated committee and competent personnel. The school implemented the CPP through programs, projects, and activities, with financial support. The program's goals were achieved, and the school had a low incidence of child abuse. Henceforth, the implementation of child protection policies within the school has garnered a strong consensus, showcasing their effectiveness in promoting positive outcomes. These policies have not only enhanced collaboration, safety, and communication but also nurtured a secure and trusting environment for the entire school community. This further solidifies its significant impact on fostering a sense of well-being and trust among the school and its community.

To sum up, the effective execution of child safety procedures at the school has shown to be crucial in producing favorable results and gaining broad acceptance. These practices, which emphasized cooperation, communication, and safety, have made the school community as a whole feel safe and trusted. These regulations are having an effect, which emphasizes how important they are in fostering the trust and well-being necessary for a healthy learning environment.

Table 8. Significant Difference on The Respondents’ Awareness of the Child Protection Policy when grouped according to Profile

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	p
Size of School	Institutional policy	0.654	3.000	0.218	0.496	0.686
	Children's right	0.279	3.000	0.093	0.277	0.842
	Duties and responsibilities of stakeholders	0.195	3.000	0.065	0.148	0.931
Type of Schools	Institutional policy	0.214	1.000	0.214	0.489	0.485
	Children's right	0.012	1.000	0.012	0.036	0.851
	Duties and responsibilities of stakeholders	0.795	1.000	0.795	1.840	0.176
Type of Respondents	Institutional policy	2.309	1.000	2.309	5.387	0.021*
	Children's right	2.277	1.000	2.277	7.047	0.008*
	Duties and responsibilities of stakeholders	1.929	1.000	1.929	4.516	0.035*

Note: * $p < .05$.

Table 8 shows the significant difference of the respondents’ awareness of the child protection policy when grouped according to profile size of school, type of schools, and type of respondents. The results reveal a noteworthy distinction in the respondents' awareness of the child protection policy when categorized by profile, particularly regarding the type of respondents. Across all indicators of the child protection policy, namely institutional policy, children's rights, and duties and responsibilities of stakeholders, there is a significant difference ($p=0.021$, $p=0.008$, $p=0.035$, respectively). This signifies that

the type of respondents plays a pivotal role in shaping their awareness of these policy aspects.

Conversely, no significant differences were observed in other indicators ($p>0.05$), indicating that factors such as the size and type of schools do not significantly influence awareness levels regarding the child protection policy. This means that ongoing monitoring and evaluation of awareness levels regarding child protection policies, regular assessments can help track progress over time, enhance awareness and compliance with the policy.



They specifically advise keeping an eye on the system that schools have implemented and investigating the range of opportunities that teachers in both public and private educational settings have access to. Their focus on safeguarding an eye on educational systems and evaluating teachers' abilities in both public and private settings emphasizes the significance of an all-encompassing approach that takes systemic problems into account while also taking frontline teachers' resources into consideration. It emphasizes the critical need for ongoing evaluation and adaptation of child protection activities within educational environments, highlighting the importance of ensuring that instructors have the necessary tools and support to effectively implement safeguarding measures.

So, the focus on targeted approaches highlights the need of a careful strategy that takes into account the particular

requirements and environments of teachers and students in a variety of learning environments. This highlights how crucial it is to continuously evaluate and modify child protection programs in educational settings. It also highlights how important it is to give teachers the tools and support they need to successfully execute safeguarding measures. In conclusion, respondents significantly influence the understanding and adherence to the policy aspects. Regular assessments allow for continuous monitoring, evaluating awareness levels, and fostering progress over time, ultimately enhancing policy compliance.

Table 9. Significant Relationship between the extent of Awareness of Child protection policy among school heads and teachers and the extent of implementation

Awareness		Implementation			
		Collaborative efforts of committees	Core approaches	Change in behavior	Change in outcomes
Institutional policy	Pearson Correlation	.592**	.583**	.568**	.537**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	233	233	233	233
Children's rights	Pearson Correlation	.654**	.620**	.554**	.565**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	233	233	233	233
Duties and responsibilities of stakeholders	Pearson Correlation	.780**	.704**	.685**	.652**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	233	233	233	233
Scale		Strength			
0.80-1.00		Very Strong			
0.60-0.79		Strong			
0.40-0.59		Moderate			
0.20-0.39		Weak			
0.00-0.19		Very Weak			

Table 9 displays significant relationships between the extent of awareness of the child protection policy among school heads and teachers and its extent of implementation across various domains. For all aspects of the child protection policy institutional policy, children's rights, duties, and responsibilities of stakeholders. There are strong positive correlations with collaborative efforts of committees, core approaches, change in behavior, and change in outcomes which indicate the r- values that range from .537- .780, and all indicators indicate that (p<0.05).

It is evident that higher awareness levels significantly contribute to the successful attainment of set goals. Better decisions, more effective strategies, and maintaining focus on goals are all possible when people are aware of their surroundings and possess more information, which eventually produces better results.

4. CONCLUSION AND RECOMMENDATIONS

Based on the aforementioned findings of the study, the following conclusions have been derived:

The study reveals that school administrators and teachers have a strong understanding of child protection policies,



encompassing institutional policies, children's rights, and stakeholder responsibilities. They have used proactive methods like committee collaboration and core approaches to translate policy guidelines into practical actions, leading to positive outcomes for students. The type of respondents significantly influences their awareness of these policy aspects, emphasizing the importance of catering to diverse groups and clear communication for widespread policy acceptance. The extent of awareness among school heads and teachers is highly correlational, indicating that greater awareness leads to more effective implementation efforts.

Therefore, the results suggest that a Program Enhancement Plan is proposed to improve the implementation of the Child Protection Policy (CPP) in both public and private institutions in the City Schools Division of Cabuyao.

Based on the findings summarized and conclusions drawn, the following recommendations are hereby offered:

1. To improve child protection policies, schools may conduct regular surveys and focus group discussions with students, teachers, and parents to understand their perspectives and identify areas for improvement.
2. Encouraging open communication channels for students to report concerns or incidents is crucial for a supportive environment.
3. CPP committees may need to monitor and evaluate the policy's effectiveness through data analysis and assess its impact on students' well-being.

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LIVED EXPERIENCES OF ADOLESCENTS IN COPING WITH MIDDLE ADOLESCENCE CHALLENGES: A PHENOMENOLOGICAL STUDY

Armijane Guevarra Elago

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The study aimed to examine the experiences of adolescents during middle adolescence stage, with a focus on coping strategies and other general challenges in various institutions such as family, school, economics and community.

Using qualitative design and transcendental approach, the researcher interviewed seven adolescents from Cabuyao Integrated National High School Senior High School through snowball sampling. Similarities among adolescents emerged most especially relating to family dynamics where they often felt misunderstood or marginalized specifically about their identity which was made worse by academic pressure due to the pandemic.

Moreover, changes in friendship patterns and other relationships contributed to their problems including financial difficulties that led them into feelings of shame and a lack of desire for help. Nevertheless, despite these hardships, adolescents used diverse ways of adaptation such as focusing on education while dealing with inner turmoil indicating that supportive relationships are crucial for resilience.

In conclusion, adolescents struggle with feeling of being misunderstood by their families, which are also made worse by academic stress as well as changing friendships. Financial issues are another hindrance to this particular group from seeking help. Still, adolescents show that they can cope even through the hardest periods using different strategies and this confirms that they need support from others in order to deal with problems.

These recommendations embrace encouraging open dialogue among family members, availing counseling services and stress management programs at schools, creating curricula on healthy relationships, offering financial aid and increased exposure to mental health resources including positive role models during difficult times for teenagers. These measures will help young people face middle adolescent turbulences and develop emotionally sustainable lifestyles.

KEYWORDS: experiences; middle adolescence stage; coping strategies

1. INTRODUCTION

Adolescence, as defined by the World Health Organization (2014), is a developmental stage of transition that generally occurs during puberty period (12-18) to young adulthood. This transition brings changes to physical to psychological aspects of human development. This stage also serves as time of exploration, identity formation, and autonomy foundation.

In this adolescence stage, there are three phases that are vital in adolescence development namely: Early adolescence (ages 10-13), Middle adolescence (ages 14-17), and Late adolescence (ages 18-21). In early adolescence (ages 10 to 13), children undergo rapid physical growth, experiencing changes such as hair growth, breast development, and testicle enlargement. These developments may begin earlier in girls than boys, leading to a range of emotions, curiosity, and potential anxiety. Gender identity questions may also emerge, particularly challenging for transgender children.

Early adolescents often exhibit concrete thinking and egocentrism, with heightened self-consciousness and a desire for independence, sometimes testing boundaries. In middle adolescence (ages 14 to 17), puberty-related changes continue, and teens become interested in romantic and sexual relationships. Brain development is ongoing, leading to abstract thinking, but impulse control remains a challenge. Late

adolescence (18-21 and beyond) sees completed physical development, improved impulse control, and a stronger sense of individuality. Late adolescents focus on the future, stabilize relationships, and establish a more mature connection with their parents. (Stages of Adolescence, n.d.)

As a vital developmental stage, adolescence stage has also anchored with challenges. These challenges vary from one person to another, however, there are challenges that may stand out due to numerous and similar factors that are present in adolescent life. Over the years, numerous research has been done to describe each developmental stage; its tasks and the importance of acknowledging it as part of development. This research paved a way to understand adolescence stage generally.

Given the above-mentioned, this study deals with the exploration of lived experiences of adolescents in coping with challenges specifically, the Middle adolescence challenges.

1.1 Statement of the Problem

Specifically, this seeks answers to the following questions:

1. What are the lived experiences of an adolescent in coping with middle adolescence challenges?



- 1.1. Challenges in middle adolescence in various institutions namely:
 - 1.1.1. Family,
 - 1.1.2. School,
 - 1.1.3. Economic; and
 - 1.1.4. Community?
- 1.2. What are their coping mechanisms for these challenges?
2. How do adolescents describe their experiences in coping with middle adolescence challenges?
3. Based on the findings of the study, what policy reformation and intervention can be proposed?

2. METHODOLOGY

The design of this study began with the decision to use qualitative methodology. Qualitative methodology, rather than quantitative methodology, was chosen for this study in reason of qualitative methodology is considered most effective for answering questions that ask how and for providing thick descriptive data of a phenomenon (Stake, 1995 as cited by Stanton, 2021).

3. RESULTS AND DISCUSSION

The results of the analysis of the interview data are presented in this chapter. The themes identified within the data included: (a) Familial Crossroads: Navigating Identity Struggles, (b) Beyond the Books: Navigating Academic Expectations and Seeking

Validation, (c) Navigating Challenges in Collaboration and Peer Relationships, (d) Emotional Consequences of Financial Hardship, (e) Emotion's Puzzle: Navigating Coping Strategies, (f) Empowerment through Relationships: Pursuing Support and Personal Growth, (g) Family Bonds and Financial Stewardship, (h) Evolution of Emotional Navigation: From Struggle to Harmony, and (i) Emotional Strength and Individual Achievement.

The research objectives for this study are (1) What are the lived experiences of an adolescent in coping with middle adolescence challenges? (2) How do adolescents describe their experiences in coping with middle adolescence challenges? and (3) based on the findings of the study, what policy reformation and intervention can be proposed? That led the researcher to develop interview questions about participants' experiences in coping with middle adolescence challenges and how they describe their experiences about it. To be able to grasp the phenomenon, an understanding of participants' description of experiences in coping with middle adolescence challenges is needed.

THEME CLUSTERING

As every significant statement is initially treated as possessing equal value, this next step deletes those statements irrelevant to the topic and others that are repeated or overlapping. The remaining statements are the horizons or textural meanings.

THEMES	
Theme 1	Familial Crossroads: Navigating Identity Struggle
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Table 1. Textural and Structural Clustering

Themes or Meaning Units and Evidence

In the process of analyzing the lived experiences of adolescents coping with challenges during middle adolescence, the researcher begins by treating each statement with equal importance. This ensures that all potentially relevant information is considered. The next step involves deleting statements that are irrelevant to the topic or repetitive, as well as those that overlap with others. The remaining statements, known as horizons or textural meanings, form the basis for further analysis. The researcher meticulously scrutinizes these notable statements and organizes them into themes or meaningful units. This method of thematic analysis facilitates a more profound comprehension of the intricate experiences of adolescents as they navigate the challenges of middle adolescence. By employing this approach, recurring patterns and valuable insights come to the forefront, offering insights

into the coping strategies, obstacles, and resilience demonstrated by adolescents throughout this pivotal stage of growth.

Lived experiences of an adolescent in coping with middle adolescence challenge.

Theme 1: Familial Crossroads: Navigating Identity Struggles

This theme explores the complex issues that adolescents are experiencing with their family dynamics and the complex nature of seeking their own identities. It involves the tension built on by various generational viewpoints and perspectives which can result in miscommunication when behaviors are interpreted in light of prior encounters.

In line with this, the following statements were extracted from the participants' transcript that may help to shed light on the



theme itself.

Participant 1 stated:

"Maybe, um, we don't understand each other too well. Like, because they have their own ways from before, of course, when they were younger, and they compare them to what I'm doing now. And I don't understand why because the surroundings are different, the environment we grew up in is different. And I don't understand why they need to compare that to what they experienced before."

On the other hand, Participant number 2 recalled instance wherein she felt challenged by the viewpoints of her family:

"My family is Catholic, and they don't agree with the concept of the third gender. They also don't agree with homosexuality. So, I haven't come out to them because I'm scared of being disowned and kicked out of the house. I have nowhere else to go."

"...Because it's about time for them to realize that there are things like that. For them to be close-minded about those things. It's annoying. It's annoying that they're so unwelcoming—not to new ideas, it's something that existed a long time ago and they still don't accept it."

Participant 5 also shared an experience:

"Maybe because adults always exclude us, it's like only for adults, that's my mom's mindset. And because of that, even though we ignore their fights, they still involve us, their frustration towards each other affects us, it's like their anger is passed on to each other, and in turn, I exert that on others."

The following statements describe the anxiety that comes with being non-binary and the fear of rejection from family, emphasizing the difficulties of negotiating identity in a conservative culture. Moreover, the feeling of exclusion in familial topics left the adolescents feel confused and invalidated as they were viewed not as an individual who can be part of the solution but rather a child who cannot handle familial discussions.

In connection with this, pre-adolescents and adolescents must develop a sense of responsibility, competence, and autonomy as they progress towards independence and young adulthood. Assisting a child in acquiring responsibility, fostering a sense of capability, and decision-making skills is a crucial parental task. The parents and guardians must consider the timing and domains in which your child can begin making decisions. The pace at which they delegate responsibilities to their child is a decision that should be made collaboratively, considering factors such as their comfort level, family and cultural norms, and the child's level of maturity. (Shifting Responsibility to Pre-teens and Teenagers, 2024)

The theme also addresses the dynamics of guilt for unfulfilled responsibilities, and the discouragement that results from receiving little credit, both of which have an adverse effect on motivation. Participant 1 recalled:

"...So, she [sister] talked to my mother, and my

mother only arrived here during the awarding ceremony [recognition]. So, it hurt because I thought if my sister was here, she'd be with me from start to finish, and I wouldn't hear anything from her except congratulations. Even once, I never heard anything like that from my family except from my sister."

Participant 2 also stated that:

"It's like, sometimes I feel discouraged to do well because I'm not receiving any recognition, so why should I bother? It's kind of discouraging."

Participant 5 stated:

"Sometimes, it feels like I can't handle it anymore. There are times when she thinks I can handle it, but I really can't. But because my mom said I can, I should be able to. It's just that, not all the time, but when things get really heavy,"

Meanwhile, Participant number 6 shared:

"...like how Mama treats me, how she takes care of me. She tells me, "I take care of you," "you're just feeding me, you're not taking care of me." She blames me for what should be her responsibility."

And Participant 7 also said:

"I can still confide in my mom, but she's more focused on my siblings. So she's losing time for me, which is understandable because she needs to take care of my siblings. But what about me? What about what's happening to me, in my day."

Furthermore, it also explores the long-term impacts of childhood trauma, such as residual trauma from parental behavior and cycle repeating. Even when parents are physically close, the emotional distance between them adds another level of complication to family dynamics.

Theme 2: Beyond the Books: Navigating Academic Expectations and Seeking Validation

As adolescents start to spend time in school, this theme shed light in adolescents' experiences in academic context. It includes the unending pursuit of exceeding the high standards set by friends and family, and even their own selves which frequently results in crippling emotions of inadequacy and dissatisfaction, especially when academic progress stalls. Even with the greatest effort, people can experience feelings of inadequacy and turn to friends and parents, among other people, for reinforcement. The persistent demand for validation—especially from a mother figure—increases the pressure to perform well in school. Furthermore, people might find themselves attempting to accomplish their academic goals and help struggling family members, which would add still another level of stress. In line with this, the following verbatim will shed light on the experiences of adolescents in facing academic related challenges. Participant 1 stated:

"I skipped kindergarten and went straight to Grade 1. And then, I immediately topped... I topped our whole class at 5 years old. And it continued like that. That's when their expectations started to become too much... at first, I enjoyed it because of course, as a child, I craved attention. And then, over time, it became toxic



especially... because I was still young back then, at first, I was okay, I enjoyed it, so I excelled. And then, next thing is I started to feel suffocated. Their expectations were already there that when they get my report card, all grades should be 9, there should be no grade of 8."

Moreover, Participant 2 shared the same sentiment by noting:
"In school, my academic performance is okay, but I always set high expectations for myself because my older sister also gets high grades. So, I often compare myself to her, and at the same time, I feel like many people expect a lot from me, not just my family but also my friends. It's challenging for me to keep up with those expectations."

Participant 4 concurred by saying:
"maybe I can achieve the expectations my parents have for me about academics."

Furthermore, Participant 5 shared that,
"In exchange for my mother's full care for us, her expectations were high. Like what she wanted, it wasn't material things, not money either, not any belongings. Just do well in school, that's all she asked for, nothing else. So, when you fail, it's heavy because you're only failing in one thing she asks for, and it feels like a burden."

In the same light as the study of Lazarides, Viljaranta, Aunola, Pesu, & Nurmi, 2016, parental expectations correlate with children's involvement and drive to attain academic success, subsequently bolstering their academic performance.

When parental expectations exceed what can be achieved, parents may react critically to their children's shortcomings, leading to heightened stress and depression among adolescents. Parental expectations can thus be both beneficial and detrimental to adolescents' development, presenting a dual-sided impact.

The academic environment is made more difficult by peers' approval, which becomes a coping strategy in the face of parental expectations to perform well academically. Meeting academic standards is made considerably more difficult by pandemic-related issues that compound the problems. By examining this issue, the qualitative research hopes to illuminate the varied experiences of people navigating the academic world and dissect the intricacies of academic pressures and the need for validation.

In connection with this, familial validation was also observed based from the description of the participants' responses. Participant 1 noted that:

"...She'll say because it's a different time for you then and when she compares me to my other sibling, my older sister will say why are you comparing her to that, she's not that, she's different and why do they always just see the mistakes, there are good things I

do too." Participant 2 stated that *"Then what happened was my mom missed the card showing. So it's like am I that unimportant that they missed such an event. Even for my sibling, they never missed it. Or like that, I felt like that."*

Participant 3 recalled an instance wherein she felt invalidated by her parents:

"And then, there was one time when I had a conversation with my dad, he was a bit drunk, and I said to him, "Daddy, why does Ate have that, and I don't?" and then I even cried, ma'am. I know it sounds silly, like about chickens, because they both had one, and I didn't, and I cried, "why do they have one?" like that, but I really cried then, ma'am, over chickens. Now, when I look back, I laugh because I cried over chickens, but now, I really don't anymore."

Moreover, Participant 5 also shared that:
"...One problem I face is the constant need for validation, especially from my mom. Since elementary, I've felt the pressure to excel in contests and achieve top grades. Even when I perform well now, my mom's reaction is less enthusiastic because she's become accustomed to it. This challenge feels like I'm pressured to maintain a high standard, and if I fall below expectations, it feels like everything will fall apart. That's how deep it is."

Participant 6 also stated that:
"I'm an attention seeker. My issues are intense. So, whenever she praises my sister for her good deeds and we've done the same thing, why is it that only she gets noticed? That's what bothers me the most."

In response to the inquiry about challenges faced within their families during middle adolescence, several participants shared experiences related to heightened parental expectations. Moreover, this theme emerged from participants' narratives, showcasing instances where they felt their experiences and accomplishments were overlooked or compared unfavorably to those of their siblings. These accounts highlight the complicated relationship between parental expectations, adolescent development, academic challenges, and familial dynamics during middle adolescence, giving emphasis to the importance of understanding and addressing these challenges within academic and family context.

Theme 3: Journeying Through Social Dynamics and Shifting Relationships

Adolescents face a wide range of difficulties throughout their difficult transition into middle adolescence, which were discussed in this theme. Some people have a deep sense of estrangement and find it difficult to relate to others as they work through maturation because they disagree with peers who have not yet reached the same point in development. In this context, friendships noticeably change, marked by an increasing awkwardness as people choose different routes and pursue new interests. External variables like parental constraints or societal



conventions, however, further complicate this natural progression by making it more difficult to sustain meaningful interactions with peers and build social skills.

The significant statements from the response of the participants are the following which answer the question “In terms of school, what challenges have you encountered, and how did you navigate them?”.

Participant 1 stated that:

“... I just find it difficult to... um... to adjust. I've noticed differing levels of maturity among us, with my own perspective on life having matured, making it challenging to connect with those who remain immature.” On the other hand, Participant 2 explained, *“In school, I struggle with talking to strangers because I don't know how to approach them. When I feel intimidated, I don't seek help and let myself struggle alone.”*

Participant 3 shared that,

“...With my classmates, there are really people who don't like you, there are people who like you, and of course, we should focus more on those who like you because with those who don't like you, you won't gain anything from them, so the people who like you, they're the ones who have concerns for you, they'll lift you up and support you all the time. But, ma'am, for me, it's also important to have support from above, from God, and support yourself because there are times when... and don't be complacent that they'll always be with you because it's not always like that, so you need to support yourself more than the support you get from others.”

Participant 5 explained that,

“...When you're no longer with them, it feels like the friendship isn't meaningful anymore. It's like that. It's like, when you're with your friends, it's fun, but when they're not right in front of you or you're not with them, it's like their presence is gone, the connection is gone. It's like that, and then, if they're not there, the friendship is gone.” *“...Yes, when I need help from my friends, most of the time, I feel shy to ask them and tell them something because sometimes it passes, they might forget about me right away after some time.”*

Participant 7 recalled that:

“In school, I feel pressured by my classmates because they're all in STEM. Especially when I became irregular, there's a lot of respect for STEM, which I feel I don't deserve.”

The responses from the participants above highlighted the effects of peer influence. In contrast, the following insights aim to address and mitigate such influences during adolescence.

For example, Participant 4 pointed out:

“When my challenges are understanding the lesson, I always ask TJ if he gets it and he'll say "yes" and then I'll say "can you, can you please explain" and what I like about it is he doesn't mind explaining, like without

any judgment he explains it well until I get it and then he'll ask me "do you get it now?" and then I'll say "yes" because I really get it already because he's good at explaining.”

Meanwhile, Participant 2 also shared that:

“I'm helped by talking to my close friends. They help me rationalize my thoughts. Just talking to them because my classmates won't shout at me. Maybe in talking to close friends and peers.”

The theme provided insights into the specific challenges adolescents encounter within the school environment, particularly in their interactions with peers. As adolescents spend a significant portion of their time in school during this developmental stage, their peers and teachers become primary influences.

This hierarchy can have detrimental effects on the self-esteem of struggling students and may diminish the influence teachers have on the students who need their support the most. It underscores the importance of educators fostering inclusive environments and valuing diverse perspectives to mitigate such negative impacts on adolescent development.

Due to a variety of reasons, being physically apart from someone simply makes one feel more alone and inadequate since friendships are seen to deteriorate under the pressure of other people's thoughts and judgments. A cycle of self-reliance and internalization of troubles is perpetuated when teenagers face these obstacles and fight with the internal tension of burdening others with their problems instead of choosing to carry their emotional loads in solitude. Adolescents encounter the intricacies of social dynamics and evolving relationships through these lived experiences, paving their own route to self-realization and fortitude in the face of adolescence's constantly altering terrain.

Group projects in the academic setting serve as a testing ground for a variety of study techniques, which frequently results in disagreements and hostilities between classmates trying to synthesize differing perspectives.

Adolescents struggle to keep their own ambition for achievement alive and avoid becoming complacent, which is made more difficult by the need to distance themselves from uninspired peers. Adolescents also struggle with social interaction and asking for help in the complicated social context of school, juggling the need to maintain a delicate balance between independence and vulnerability.

Theme 4: Emotional Consequences of Financial Hardship

Theme 4: Emotional Consequences of Financial Hardship resonates powerfully with the lived experiences of adolescents facing financial struggles in the crucible of middle adolescence.

The significant statements from the response of the participants are the following in response to the question “Can you share an experience related to financial challenges that you find particularly significant during this stage of your life?”



Participant 1 stated that she's not experiencing challenges in line with financial challenges as she is very well-supported by her family, however, there are instances that she shared that made her feel challenge for instance:

"Ah, well... it's not like, um... it's not like it's different for us, Shopee, Lazada, those kinds of things. So, I tend to buy online, Amazon, like that. And then, of course, we still have expenses for school, especially for major subjects because it's more on tools, more on equipment, more on practical stuff, so the components are expensive. And sometimes I just think, um... I should have used the money I spent on Shopee for my school projects instead."

In addition, she also stated:

"My moods and behaviors were influenced by my financial burden; when preoccupied with it, I tend to feel angry, whereas having more money tends to make me happier.", again, despite of this challenge, she clarified that she is still well-supported by her parents.

On the other hand, Participant 2 shared the following experience:

"Sometimes, in a day, there are times when I'm hungry but I can't tell them because I'm ashamed because I know our financial situation, that I can't tell them that I'm hungry to buy food because I feel guilty about fulfilling my needs because of our current situation" she added *"I think, the cost of living is higher now. Then, it's not something that my dad's salary can reach. And my mom can't work either. She doesn't work."*

Meanwhile, Participant number 3 stated:

"Ah, okay. Of course, in school, there are things to take care of, you need to buy things, you need to pay attention to things, and it's not about your personal needs first, what's needed should come first before what you want, so in terms of money, my challenge there is that I really want to buy something but I need something else, so I always stick to that, I want to buy something but I set it aside first because what I need now is more important, what I want now I can still buy later, there are times when I can save up for it, but this is the time I need, it can't be brought back, so we need to prioritize, so that's it, ma'am, in terms of financial and needs."

In line with this, Participant 4 recalled:

"My father is a bit... he gets carried away easily because he's the youngest. So, I don't see what they're saying that my dad needs to be responsible because he's the youngest, he still has an older sister. Then we're financially short... because of that but I don't take it against them because it's my grandfather. My only issue is that the money doesn't go to my grandfather. They take it. That's the only reason why we're short."

In accordance with this, Participant 5 also shared her experience:

"The biggest challenge in our family was financial, which was heavily connected to my dad. He's no longer with us now, he's in the province where he grew up. It's just me, my mom, and my two older brothers here in Laguna. My dad used to be an OFW, and he stayed there for most of my childhood, so I didn't get to spend much time with him. But at some point, around when I was 12, he stopped sending money, and then he had problems with his job, the company cut employees, so he lost his job. He stayed there for a long time because there was no money for him to come back to the Philippines. That's when our family started to decline, and we moved to a relative's house because they said it would be cheaper that way. But during that time, that was the biggest experience I had when I was younger."

Participant 6 explained:

"Sometimes, it goes overboard, you know, you overspend on wants more than needs. Like sometimes, our meal is just one piece of fish because he bought nice pants. My mom is like that. When she really wants something, and my dad's salary is there, she'll get it. That's for our food."

Participant 7 also noted:

"I'm thinking about my college education because if I stay with my mom, I know she can't afford it because we are four siblings. If I stay with my dad, he can support me on his own. But with my mom, we are tight on money, but I just say it's okay as long as I am protected"

The presented scenarios demonstrate the different challenges in adolescent life. Financial struggles extend beyond the immediate family to involve other relatives. However, among the seven participants, two participants noted receiving support from their extended family members as well. Participant 4 stated that:

"On my father's side, they always spoil me because I'm my grandma's favorite grandchild, so they always keep an eye on me being spoiled by my grandma because I'm her favorite grandchild, then they say they're the ones who are close by, but I'm the favorite? On my aunt's side, there's Ma'am Ann, they're my godmothers. I am always very spoiled."

On the other hand, Participant 7 also shared the same sentiment:

"For that, my uncles help. For example, they treat me, they leave me with my allowance, my money. "Neng, here's your allowance. Don't ask your mom." But when I have nothing left, I really have to ask."

These narratives show how financial problems affect adolescents and their families in many ways. It's not just about not having enough money – it impacts their daily life and how they feel emotionally. The provided narratives reveal that



adolescents and their families have to make tough choices with the financial capacity that they have, focusing on what they really need over what they want.

This theme also highlighted the importance of help from outside the family when money is tight. Some participants talked about how their extended family, like grandparents or aunts, helped out when things were tough. This support can make a big difference during difficult times.

Individuals from lower socioeconomic status (SES) backgrounds displayed heightened mental health challenges not only during adolescence but also as they transitioned into emerging adulthood. Conversely, adolescents with greater self-efficacy, a positive family environment, and stronger social support exhibited fewer mental health issues during emerging adulthood.

Notably, higher self-efficacy during adolescence was found to mitigate the impact of lower SES on mental health problems during emerging adulthood. While the individual effects of these factors were modest, collectively, they exerted a moderate longitudinal influence on mental health outcomes in emerging adulthood, five years later. Interestingly, the protective effect of social support appeared to be more pronounced among adolescents from higher SES families rather than those from lower SES backgrounds. This finding is noteworthy given that both lower SES and limited social support independently correlate with increased mental health concerns during emerging adulthood.

Their feelings and actions are strongly impacted by the weight of their financial obligations as they negotiate the challenges of puberty. Their ongoing battle to make ends meet has a negative impact on their moods and social relationships, casting a shadow over their everyday lives. Adolescents often experience feelings of guilt and humiliation when they need to ask for help since they are stigmatized as having financial difficulties.

Theme 5: Emotion's Puzzle: Navigating Coping Strategies

The theme of "Emotion's Puzzle: Navigating Coping Strategies" dives into the complicated landscape of middle adolescence and emphasizes the individual journeys of adolescents as they manage the challenges of emotional regulation and resilience.

Adolescents frequently use a variety of coping strategies to get through the difficulties they encounter during the chaos of this life-changing stage. Rather than facing their inner anguish head-on, some people try to hide their sensitivity behind work and solitude. Others immerse themselves in academics, hoping to use the pursuit of achievement as a buffer against conflict within the family in an effort to satisfy their parents. However, the stress brought on by the epidemic may push some people to self-harm as a coping strategy, a last-ditch effort to ease their emotional suffering in the face of overwhelming challenges.

Participant 1 stated:

"Well, I act strong. Then, I always smile and sometimes, I just stay inside, ignoring them or not talking to

them. And, I distance myself from them because I know the closer I get, the more hurt I'll be, so I just distance myself. And, maybe, I always... I always... I keep myself busy. Even if the electric fan isn't broken yet, I'll fix it right away, like that. Just so, I don't... I'll find ways so I won't get close to them, won't talk to them, like that."

Meanwhile, Participant 2 also shared:

"Because my main coping mechanism is self-harm. So, that's what becomes my main one, especially during the pandemic. That's where it really started and then, it got worse. To the point that when my family found out, they scolded me more than comforted me but they did help me gradually but my coping mechanism is mainly there and now, with the family, I just ignore things like not being given attention, I just don't care. It's nothing to me."

In addition to this, Participant 5 recalled:

"...then I cry quietly because if you cry loudly, you'll be heard and you'll attract attention, so I hide first and then I cry quietly, but deep sobs because when you cry, you release all of it but quietly, then I do breathing techniques, and then, I'm okay again. You just tell yourself, "you still have things to finish, things to do. So, stop crying, it's okay now," then I proceed to do what needs to be done."

In facing the increasing academic stress and emotional distress, these coping mechanisms are ineffectual for a lot of people, which feeds into a vicious cycle of inner conflict and distress. Adolescents struggle with the weight of taking in parental dissatisfaction and transferring it onto others, which further complicates their emotional landscape, despite the strong exterior they present to their classmates and family.

However, a hint of resilience appears as adolescents learn to live alone and rely on themselves, finding self-reliance as a good weapon to combat challenges puberty. Some find that their sense of duty to their siblings offsets the weight of suicidal thoughts, providing a glimmer of hope during despair. Adolescents navigate the maze of emotions by going on a very personal journey of resilience and self-discovery, putting the pieces of their emotional puzzle as they journey through the maze of middle adolescence.

Various coping mechanisms were presented from the above statements. However, the distinction between positive and harmful coping mechanisms lies in their effectiveness and long-term consequences.

Theme 6: Empowerment through Relationships: Pursuing Support and Personal Growth

In discussing the complex and interrelated challenges in adolescence, this theme captures the remarkable journey of teenagers as they negotiate the difficulties of interpersonal connections and self-discovery. Adolescents witness a shift in their sibling relationships during the turbulent adolescent years, moving from previous fights to a newly discovered sense of understanding and unity with growing older. Adolescents



actively seek assistance and self-improvement in their pursuit of resilience and personal progress, realizing the importance of outside support in overcoming obstacles in life. With the help of their peers, they set out on a journey to develop their confidence, drawing strength from the relationships they have with close friends along the way.

The following statements shows how adolescents navigates challenges and cope through time in different aspects of their lives.

Participant 3 noted:

"...But I realized at my age that I don't need to feel that way anymore, I just need to understand because they're my siblings, they're not strangers. So when they're happy, whatever they receive,"

As Participant 5 recalled:

"We're close now with my siblings, but when we were younger, especially with the second one, we used to fight a lot."

As they progress into late adolescence, these sibling bonds tend to deepen further, particularly if there was a foundation of affection in their earlier years. During this stage, siblings with minimal age differences often find themselves drawn closer together due to shared experiences, joys, and stresses. With advancing cognitive maturity, even teenagers with significant age gaps between them and their siblings are less prone to irritation, as they now grasp their younger siblings' needs and desires better. Consequently, they can engage with their younger siblings with increased patience and empathy.

Moreover, adolescents are drawn to classmates who are positive and supportive in order to create meaningful connections that promote their sense of wellbeing and belonging. Adolescents who recognize the value of academic achievement rely on peers to help them bridge the emotional and educational divide by providing empathy and support. They find it simpler to open up to friends when they have a sense of trust and confidentiality, sharing their vulnerabilities and finding comfort in the assurance of unwavering support.

Participant 1 stated that:

"But now, when I told my friends about it, I stopped. Now, I've been six months clean from self-harm, and now my main coping mechanism is talking to them and crying. That's it. It's become healthier now."

Participant 2:

"I seek help from my friends so that... uh... maybe I can achieve the expectations my parents have for me about academics."

Adolescents seek solace from reliable confidants during difficult periods in their families, finding resilience and strength in friendships that endure even in the face of loss. Adolescents traverse the complex web of connections through these lived experiences, discovering personal development and empowerment within the encouraging embrace of their peers.

Gaining acceptance from peers plays a vital role in affirming one's self-esteem, while experiencing rejection from peers can

potentially predict future behavioral issues, particularly if it stems from aggressive behavior. As children mature, they face various challenges such as bullying, peer victimization, and the pressure to conform.

Theme 7: Family Bonds and Financial Stewardship

Theme 7: Family Bonds and Financial Stewardship sheds light on the complex interactions that exist between the demands of financial responsibilities and familial dynamics in the context of middle adolescence. Teenagers struggle with the intricacies of family life and understand the need of teamwork while facing common obstacles. Adolescents find comfort in talking to their parents as they navigate the turbulent waters of adolescence, especially when outside support networks are involved. In addition, adolescents who are experiencing financial distress set out on a path of self-improvement, becoming more financially responsible and empathetic to their parents who are having difficulties. As stated by Participant 1:

"Um... I find it hard to manage, and to the point that I breakdown because I don't know what to do, whether to ask my parents for extra or to just be thriftier, and I choose to be thrifty because of course, my parents also have expenses."

Meanwhile, Participant 2 also shared her experiences:

"when I'm hungry but I can't tell them because I'm ashamed because I know our financial situation, that I can't tell them that I'm hungry to buy food because I feel guilty about fulfilling my needs because of our current situation"

Participant 3 also stated that:

"there are things to take care of, you need to buy things, you need to pay attention to things, and it's not about your personal needs first, what's needed should come first before what you want, so in terms of money, my challenge there is that I really want to buy something but I need something else, so I always stick to that, I want to buy something but I set it aside first because what I need now is more important, what I want now I can still buy later, there are times when I can save up for it, but this is the time I need, it can't be brought back, so we need to prioritize,"

Participant 4 noted that:

"I don't want... my parents to struggle too much because they're also saving so I don't want to waste money and then they'll struggle just to earn that money again. So, I just save it"

Participant 5 shared that:

"...I walk [from school to house] to save money. But if it's getting late, I have to take the bike because my mom will get mad. And during the time we had financial problems, I had no choice but to walk from school to home"

They discover how to put needs ahead of wants and manage the family's financial difficulties by striking a careful balance between personal preferences and sound financial management. Adolescents develop resilience and fortitude via these life events, strengthening their ties to their families and taking on the responsibility of financial management as they mature.



To effectively handle their finances, individuals must navigate a continual stream of financial choices concerning both spending and saving. These decisions encompass a diverse array of products, services, and financial providers. This entails discerning among various options to optimize their financial well-being.

Theme 8: Evolution of Emotional Navigation: From Struggle to Harmony

From Struggle to Harmony represents the remarkable transition adolescents go through in navigating their emotional landscapes within the changing landscape of middle adolescence. Adolescents progress from battling unhealthy coping methods to adopting more beneficial coping mechanisms that are fostered by encouragement and honest dialogue through the process of self-discovery and personal development. In the middle of the complexity of teenage emotions, they transition from jealousy to acceptance and satisfaction, finding comfort in accepting their individual paths without evaluating themselves against others.

On this note, Participant 2 shared that during her unhealthy coping mechanism, they found healthier way to deal with challenges as they choose to confide with their friends.

"But now, when I told my friends about it, I stopped. Now, I've been six months clean from self-harm, and now my main coping mechanism is talking to them and crying. That's it. It's become healthier now"

On a similar manner in different context, Participant 3 stated that:

"But now, I want to let them know when I want to say something, so they're aware of how I feel, ma'am, so we can talk but of course, in a nice way with respect"

Participant 4 shared that:

"Uh... I would describe it as... uh... comfortable because before I couldn't really open up to my parents about... uh... about myself because I'm not really someone who talks to them before... but when I was in Grade 10... uh... I became... uh... more vocal to them because of someone... I mean, I was helped to become vocal, to my parents."

Adolescents also value politely sharing their emotions with family members, realizing how crucial it is to promote harmony and understanding in family dynamics. Adolescents travel on a path of emotional maturation as they negotiate the complex terrain of adolescence, developing closer relationships with both themselves and others while striving for inner peace and harmony amidst life's challenges.

In line with this, the parental role and bond with a teenager remain significant, albeit requiring adaptability to meet the evolving needs of the adolescent. During this phase, there's a gradual transition from a more directive stance to a collaborative approach.

Parents struggle with the reality that their child is entering independence and may no longer heed their guidance. This shift can be distressing as they witness their teenager's choices diverging from their own values and teachings, especially regarding health and future aspirations.

Learning to relinquish control over their child's path while maintaining the relationship poses a challenge for parents. They must release their own aspirations for their teenager and their authoritative grip, allowing space for the young person to foster their own dreams and assume greater self-responsibility.

Theme 9: Emotional Strength and Individual Achievement

Theme 9: Emotional Strength and Individual Achievement, which depicts the complex interplay between emotional resilience and personal success in middle adolescence, reflects the profound journey of teenagers in this context.

Adolescents get over their turbulent feelings of jealousy toward their siblings during the ups and downs of puberty, which helps others embrace and comprehend their individual journeys.

Participant 1 noted:

"I need to be independent because if I don't do that, I'll be the only one who suffers in the end."

Participant 2 also shared that:

"...[I am] happy that I overcame it and really, there are people who are willing to help me too"

Participant 3 stated that:

"...perseverance, you shouldn't give up. Whatever challenges you encounter because that's how it is, there are many trials but once you don't give up, you keep striving, keep fighting even without a finish line, you'll achieve what you want. So that's it, ma'am, perseverance, don't give up, we're not allowed to give up"

Meanwhile, Participant number 5 noted that:

"Your challenge can be your motivation, so you gain positive feelings, you're stimulated, and you're excited to see the outcome. But at the same time, you feel nervous because it might not turn out as you expected. And then, with the coping mechanism I use, you'll feel sad, angry, and anxious,"

Adolescents develop a sense of gratefulness for the chances and resources available to them, while facing challenges and feeling unsupported, which strengthens their resolve to succeed despite all odds. Driven by an innate desire to succeed and establish their value in spite of perceived shortcomings, they tenaciously endure despite fatigue and obstacles.

Individuals in this state feel valued and embraced by their social environment, which fosters a drive to explore new opportunities and embrace novel experiences. They exude optimism regarding their future prospects and demonstrate adaptability in problem-solving. Setting both short and long-term goals comes naturally to them, as does assuming accountability for their actions and choices. They possess a keen awareness of their strengths and weaknesses, demonstrating resilience in the face of criticism and an ability to confront challenges with self-reflection.



How do adolescents describe their experiences in coping with middle adolescence challenges?

The description of the above-mentioned experiences may fall under the description of resilience. As Del Carmen Pérez Fuentes et al. (2020b) stated, resilience can be seen as an innate quality within individuals that empowers them to effectively confront and surmount challenges and setbacks. It acts as a fundamental aspect of psychological and social adaptation to the various stressors and hardships encountered throughout life. Particularly in the realm of adolescent development, resilience holds a central position in shaping their overall well-being and life trajectory.

Adolescents who possess high levels of resilience often exhibit an impressive capacity to cope with adversity in constructive and adaptive manners. They demonstrate resilience as a personal skillset, allowing them to bounce back from setbacks, manage stress, and maintain a sense of emotional balance even in challenging situations.

The importance of resilience in adolescent development becomes apparent through its association with numerous outcomes. Firstly, resilient youths are less susceptible to developing behavioral issues. Instead of yielding to negative influences or engaging in risky behaviors, resilient adolescents tend to display behaviors that support their well-being and positive growth.

Moreover, resilience contributes to academic achievement. Adolescents with resilience typically maintain higher levels of academic performance despite facing academic hurdles. They showcase perseverance, problem-solving abilities, and a positive approach to learning, enabling them to overcome academic challenges and strive for success.

Additionally, resilience plays a crucial role in fostering positive interpersonal relationships. Resilient adolescents are better equipped to navigate social obstacles and conflicts in a constructive manner. They exhibit effective communication skills, empathy, and the capacity to seek support when necessary, thereby cultivating healthier relationships with peers, family members, and other significant individuals in their lives.

The experiences of adolescents in coping with the challenges of middle adolescence can be understood through the lens of resilience. Resilience, described as an inherent quality within individuals, empowers adolescents to effectively confront and overcome obstacles and setbacks they encounter during this developmental stage. Adolescents who exhibit high levels of resilience demonstrate constructive and adaptive coping strategies, enabling them to bounce back from setbacks, manage stress, and maintain emotional balance even amidst challenging circumstances.

Furthermore, resilience is associated with positive outcomes in various areas of adolescent development. Resilient youths are less likely to develop behavioral issues and are more inclined to engage in behaviors that promote their well-being and

positive growth. Additionally, resilience contributes to academic achievement, as adolescents with resilience demonstrate perseverance, problem-solving skills, and a positive attitude toward learning, allowing them to overcome academic challenges and strive for success.

Overall, resilience serves as a protective factor for adolescents during middle adolescence, equipping them with the skills and mindset needed to navigate this period of transition and emerge stronger and more capable of overcoming obstacles in various aspects of their lives.

Based on the findings of the study, what policy reformation and intervention can be proposed?

This program intends to delve into a deeper exploration of coping strategies designed to address the challenges commonly encountered by individuals in middle adolescence. Additionally, it seeks to refine and amplify the effectiveness of the already identified coping mechanisms. By conducting a comprehensive examination, this program aims to uncover insights into coping strategies that can be particularly beneficial for navigating the complexities of middle adolescence. This will be achieved through a process of revisiting and reassessing existing programs and activities that are linked to the DepEd MATATAG initiative. By thoroughly examining these programs and activities, the study aims to identify areas where enhancements can be made, ensuring that they are better equipped to support adolescents in navigating the complexities of middle adolescence. Through this endeavor, the study seeks to contribute to the ongoing efforts to promote the holistic development and resilience of adolescents within the educational framework established by the Department of Education.

In line with this, intensifying existing projects such as the T.E.E.N.DIG Project is an option. The researcher seek to further intensify the above-mentioned project to provide opportunities to adolescents to be heard and taken-care off by the society. The T.E.E.N-Dig (Trustworthy, Engaging, Encouraging, Nurturing a place for adolescents and Dignity) Project is a response by the mentioned department to address the rising cases of teenage pregnancy, HIV, and mental health issues in CALABARZON, which has the highest incidence of these problems according to Medical Officer III and Adolescent and Health Development Program Outcome Manager, Dr. Jaira Evangelista. Through this project, adolescents will be provided with accurate information about reproductive health and the negative effects of early pregnancy. They will be taught healthy values to protect and nurture their well-being. Additionally, they will be guided in making informed decisions to avoid sexually transmitted diseases, mental health issues, substance abuse, and more. The TEEN-Dig also aims to help youth become more resilient in handling their emotions and facing life's challenges. It recognizes the rights, values, and opinions of young people and believes in their ability to implement and expand the said project. This existing project should be intensified and integrated in school activities wherein adolescents spend most of their time.



Table 2. Action Plan: Revisiting T.E.E.N.DIG Program

Area and Project Title	Objectives	Persons Responsible	Time Frame	Resources Needed/ Source of Fund	
				Equipment/ Material Needed	Source of Fund
1. Revisiting existing Project T.E.E.N.DIG PROGRAM	To increase adolescents' understanding of the ongoing project, which could potentially empower them.	Guidance Counselor and the Principal	July - September, 2024	Projectors LCD Projector Marker Manila Paper	MOOE
2. Addressing the unique challenges and coping mechanisms in Middle Adolescence in their CATCH-UP Program	To further educate the different challenges in middle adolescence and how the adolescents may cope with it.	Teachers Guidance Counselors	October, 2024	CATCH-UP FRIDAY MATERIALS	MOOE
3. Strengthening Adolescent Coping Skills	To involve the community in addressing middle adolescence challenges.	Project USAP Proponents social Development Unit	November, 2024	Seminar Facilities Social Worker Speaker	MOOE
4. Adolescence For the Better Campaign	To help adolescents to view themselves as capable beings that can be resilient in times of challenges.	Project AK Members, Supreme Student Council, Guidance Counselor and Teachers	December- January, 2024	Print Ads	MOOE

This program may enrich the existing body of knowledge by refining existing strategies and introducing innovative approaches that could better equip adolescents to cope with the diverse array of challenges they face during this developmental stage. Through this exploration and enhancement, the study may contribute to the development of appropriate interventions aimed at supporting the well-being and resilience of adolescents during the critical phase of middle adolescence.

The researcher has proposed a plan to deepen the utilization of the current strategies designed to manage the challenges commonly faced by individuals in middle adolescence. Aligned with the Department of Education's initiative, the DepEd MATATAG program, which is dedicated to fostering the well-being of learners, this study endeavors to reinforce the efficacy of the identified coping strategies.

Contrarily, according to the findings discussed in the study, the family, particularly parents, plays a crucial role in the life of an adolescent. Challenges such as communication gaps, insufficient provision, and related issues have emerged from the study. It is recommended that school administrators prioritize the importance of family, particularly parental involvement, within their respective domains, as it helps students grasp social engagement with the guidance of their parents or guardians. The researcher underscores the significance of parents not only in students' academic journeys but also in their social interactions, urging administrators and facilitators to acknowledge their value.

Moreover, in response to this challenge, the researcher suggests enhancing familial bonds. Strengthening these bonds can foster an environment where adolescents feel listened to and acknowledged, thus promoting a sense of validation for them.

Table 3. Action Plan: Strengthening Familial Bonds

Area and Project Title	Objectives	Persons Responsible	Time Frame	Resources Needed/ Source of Fund	
				Equipment/ Material Needed	Source of Fund
1. Revisiting program in strengthening familial bonds	To increase adolescents' understanding of family as the basic unit of society.	Guidance Counselor and the Principal	July - September, 2024	Projectors LCD Projector Marker Manila Paper	MOOE
2. Incorporating the values of the Department of Education and strengthening cooperation in coping with middle adolescence challenges	To incorporate discussions on the significance of parents and guardians' involvement in raising middle adolescents.	Teachers Guidance Counselors	October, 2024	CATCH-UP FRIDAY MATERIALS	MOOE
3. Family Values Campaign	To strengthen the significance of conveying and fostering unity, solidarity, and stability within the FUTURE-GEN.	Teachers Guidance Counselors	November, 2024	Seminar Facilities Social Worker Speaker	MOOE
4. Adolescence For the Better Campaign	To help adolescents to view themselves as capable beings that can be resilient in times of challenges.	Project AK Members, Supreme Student Council, Guidance Counselor and Teachers	December- January, 2024	Print Ads	MOOE

Textural and Structural Description

Textual and Structural Descriptions From the thematic analysis, the researcher then provides a description of "what" was experienced in textual descriptions, and "how" it was experienced in structural descriptions. Textural descriptions are considered, and additional meanings are sought from different perspectives, roles, and functions (Moustakas, 1994). This process of imaginative variation leads to the structural

textures resulting in essential structures of the phenomenon.

Textural Description

Adolescents in adolescence face multiple challenges during this stage of development. In life's journey, our family shapes much of who we become. Theme 1 delves into the complexities of family dynamics, where individuals may feel misunderstood compared to their siblings or face ridicule from them. This



struggle is compounded by the fear of not being accepted for one's true identity, particularly in environments that are conservative or non-accepting. Additionally, childhood traumas and emotional distance from parents add further challenges to this journey of self-discovery.

Moving on to Theme 2, there's a significant emphasis on the pressures of academic success, with individuals striving for approval from both family and friends. The added burden of navigating through the challenges brought about by the pandemic intensifies this pressure.

As for Theme 3, it explores the evolution of friendships as we grow older. It becomes increasingly difficult to maintain connections with friends whose perspectives and priorities diverge from our own.

Theme 4 exposes the emotional toll of financial struggles, where individuals may feel ashamed or reluctant to seek assistance for basic needs.

In Theme 5, various coping mechanisms employed to navigate through tough times, from immersing oneself in work to battling with self-harm. Lastly,

Theme 6 underscores the importance of supportive relationships in fostering personal growth and resilience. Whether it's through familial bonds or friendships, these connections provide solace and empowerment, serving as pillars of strength during life's challenges.

Structural Description

Middle adolescence is a time when young people face many challenges as they grow up. Theme 7 is about how families work together to deal with tough times and manage money wisely. As teenagers get older, they learn to talk to their parents better and understand the importance of being responsible with money. Theme 8 shows how they're learning to handle their emotions, like jealousy, and talk openly with their family. In Theme 9, teenagers start to focus on their own achievements, like doing well in school, and learn to stay positive even when things are hard. Adolescents learn to cope with feelings like sadness and fear, getting stronger as they face life's ups and downs. These themes show how teenagers grow and become more resilient during this important time in their lives.

Overall Essence

The textual and structural descriptions of the experiences are then synthesized into a composite description of the phenomenon through the research process referred to by Moustakas (1994, p. 100) as "intuitive integration." This description becomes the essential, invariant structure of ultimate "essence" which captures the meaning ascribed to the experience.

Through extensive research into the experiences of adolescents traversing middle adolescence, a multifaceted understanding comes to light. Adolescents are often perceived as individuals straddling the line between childhood and adulthood. They

simultaneously crave parental and guardianship involvement while yearning for independence to explore various aspects of their lives during this transitional phase. As they undergo myriad stages of transition, challenges inevitably surface, demanding attention for a smoother progression to the next developmental phase.

Bronfenbrenner's Ecological Theory offers a framework for delving deep into the interactions among ecological systems and elements that influence an individual's ability to navigate challenges. Specifically, it facilitates an examination of how family dynamics within the microsystem or broader cultural norms in the macrosystem can shape an adolescent's coping strategies and decisions regarding social interactions and the challenges unique to middle adolescence.

Adolescents encounter a complex web of challenges intricately intertwined with familial dynamics and personal identity development. Themes such as familial discord, academic pressures, and financial constraints underscore the turbulent nature of this stage. This journey is characterized by a delicate equilibrium between seeking acceptance and carving out individual paths amidst societal expectations. Coping mechanisms, ranging from immersion in academic pursuits to grappling with emotional upheavals, showcase adolescents' resilience in the face of adversity.

However, amid these challenges, supportive relationships emerge as pillars of strength, fostering growth and resilience. Middle adolescence thus represents a pivotal juncture wherein adolescents navigate the complexities of identity, relationships, and adversity, ultimately shaping their trajectory toward adulthood with courage and resilience.

4. CONCLUSION AND RECOMMENDATIONS

In relation with the above-mentioned findings, the following conclusions were drawn:

1. Adolescents often feel misunderstood or marginalized within their families, compounded by fears of not being accepted for their true identity, particularly within conservative societal norms.
2. Academic pressures weigh heavily on adolescents, as they strive for validation from both family and peers, intensified by pandemic-related stressors.
3. Shifting dynamics within friendships pose challenges, testing the resilience of these relationships as adolescents navigate divergent perspectives and changing priorities.
4. Financial hardships elicit feelings of shame and reluctance to seek assistance, hindering adolescents from seeking the support they need.
5. Adolescents employ various coping mechanisms to deal with adversity, ranging from academic immersion to battling internal struggles such as self-harm.
6. Supportive relationships, whether familial or friendships, emerge as crucial sources of strength, fostering personal growth and resilience amidst life's trials.



The following were recommended based on the findings of the study:

1. Empower family members to be open in their communication and establish a safe haven for teens where they can air their minds. Parents and guardians should strive to comprehend and acknowledge the authentic identity of their teen children. The weekly Adolescent Parent Activity session is an example of such programs.
2. Schools can put in place full support mechanisms that are aimed at reducing academic loads on teenagers. One strategy can be provision of counseling services, creating peer support groups and organizing stress management workshops as ways to help students deal with the pressures of academia.
3. Programs may be developed by schools and other community organizations targeting adolescents on friendship values and communication skills that work well within healthy relationships. Through such programs, adolescents will learn how to cope with changing dynamics among friends while cultivating resilience towards maintaining good relations.

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AUGMENTED PEER LEARNING IN TEACHING ARLING PANLIPUNAN 9

Danica Marie E. Titan

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

Araling Panlipunan teachers face challenges in selecting teaching strategies that cater to students' needs, interests, and subject complexity, as social studies often focus on memorization. This study aims to determine the effect of augmented peer-learning on Grade 9 students in teaching Araling Panlipunan 9. It sought to find the following: the level of use of Jigsaw Technique; Augmented Peer-Learning; knowledge acquisition; pre-test and post-test scores with the use of augmented peer-learning. It also to apprehend the significant effect between different types of jigsaw technique and augmented peer-learning on knowledge acquisition. Lastly, to get the differences between pre- and post-test scores before and after using jigsaw technique.

This study utilized descriptive research design to compare the scores of the respondents before and after the intervention. The instrument used in the study was validated self-made questionnaire consisted of five questiond per variable. Respondents are one hundred twenty-one (121) Grade 9 students who are purposively selected at Ibayiw Integrated National High School Alaminos, Laguna.

Result shows that the different types of jigsaw satisfactorily in terms of chronological, procedural, and model/human, are all very high; augmented peer-learning in terms of active participation, engagement and motivation, diversity and inclusion, and adaptability are all very high; knowledge acquisition in terms of visual literacy, critical thinking, and collaboration were all very high; pre-test scores suggest that most of students performed fairly satisfactorily; post-test scores most of the students performed satisfactory. Also, substantial improvement in the students' performance in Araling Panlipunan. Therefore, there is a significant difference between students' pre-test and post-test scores. In addition, among the components of Augmented Peer Learning, Visual Literacy showed a notable significant effect. Lastly, Human Model and Chronological types of Jigsaw Technique showed a significant effect on the knowledge acquisition of the students.

Moreover, it shows that significant difference on pre-test and post-test were identified and the significant effect as well on augmented peer-learning and jigsaw technique on knowledge acquisition. Therefore, all the hypotheses were rejected. This means that augmented peer-learning is beneficial in teaching Araling Panlipunan 9 and it will help the learners to express their ideas freely and show their uniqueness in learning.

Findings have been gathered, and recommendations for consideration have been made. The study was confined to four parts thus, more research is necessary to be carried out in the future to get more precise and reliable findings.

KEYWORDS: *teaching strategies; students' needs; subject complexity*

1. INTRODUCTION

Teaching methods have been cited as one of the difficult areas of education by numerous scholars and educators. Children only enter the cognition stage when they get to understand themselves, which is one of the objectives of modern educational techniques to foster critical and creative thinking. The most frequent issues that Araling Panlipunan teachers run into are the lack of interest of the students, the difficulty of enhancing the activities to meet the needs of the students and the complexity of the subject. These issues result in disruptive behaviour during class discussions, a lack of motivation to learn, and most importantly, failure to complete the task assigned to the students.

For the students of the twenty-first century, innovation is essential. Educators are mainly concerned with the authenticity of the learning environment and the learners should be skilled at integrating a range of abilities, including critical thinking, problem-solving, and teamwork. Teachers must be familiar with the learning theory that underpins 21st-century methods to educate learners on how to learn effectively. The educational

learning theory explains how knowledge is received, processed, and retained by students while they are learning. There are numerous techniques and strategies for facilitating the process of learning, including variation theory (Cheng, 2016). Students who work together for a similar goal are exhilarated to study and become better in progress in class. Collaborative learning allows people who don't know as much to learn while working alongside those who do. Kenneth Bruffee first popularized the Classroom Consensus Group teaching strategy in 1972. In this approach, students are divided into groups and given questions or issues to address collectively refer to E-learning Essentials, (2020).

The Jigsaw method is one of the techniques that can encourage student collaboration; it has been found that when this method is used in collaborative learning, students' critical thinking processes when it comes to their capacity for expression and communication skills develop. In a Jigsaw classroom, the identically enrolled students are divided into 5–6 groups known as Jigsaw groups. The lecture has been divided up into parts. Each group member is given a part that is unique from the others. The class is then divided up again according to the



section that was given to them. The new group is identified as the expert group, and each member is required to research and work together on the section that has been assigned. Students from various groups who have the same learning component assigned to them come together to discuss and tutor one another on the topic at hand, forming expert groups members return to their Jigsaw group to teach their separate allotted segments after having learned them. An exam is given to each student separately. Research by Salabuyba (2018) mentioned that it has convincingly demonstrated the effectiveness of this teaching strategy in a specific context.

To engage students and help them understand difficult issues relating to human behavior, civilizations, and cultures, social science teachers must employ a variety of strategies. Effective social science education sometimes needs a variety of strategies to accommodate various learning styles and objectives. Furthermore, building a supportive and inclusive learning atmosphere is critical for successful social science education this is the reason why the the researcher came up with the study of Augmented Peer Learning in Teaching Araling Panlipunan 9.

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the level of use of Jigsaw Technique with regards to:
 - 1.1 Chronological Jigsaw;
 - 1.2 Procedural Jigsaw; and
 - 1.3 Model/Human Jigsaw?
2. What is the level of Augmented Learning in terms of:
 - 2.1 Active Participation;
 - 2.2 Engagement and Motivation;
 - 2.3 Diversity and Inclusion; and
 - 2.4 Adaptability?
3. What is the level of knowledge acquisition of the Grade 9 students in terms of:
 - 3.1 Visual Literacy;
 - 3.2 Critical Thinking; and
 - 3.3 Collaboration?
4. What is the level of pre-test scores of the students before using augmented peer learning?
5. What is the level of post-test scores of the students after using augmented peer learning?
6. Is there a significant effect between different types of jigsaw techniques and knowledge acquisition?
7. Is there a significant effect between augmented peer learning and knowledge acquisition?
8. Is there significant differences between the pre-test and post-test scores of the students in Araling

Panlipunan 9 before and after using the jigsaw technique?

2. METHODOLOGY

As cited by Xueting Xiong, (2022) the definition of quantitative research varies amongst academics, although it usually includes similar essential components. Mohajan, Haradhan. (2021), "Quantitative" denotes number or quantities (how many) data collected during a study is analyzed using mathematical methods, including statistics, to answer questions such as who, what, when, where, how much, how many, and how. It deals with statistics, logic, and an objective viewpoint. In addition, Ghanad, Anahita, (2023) said in order to collect accurate and trustworthy data regarding variables, quantitative researchers must ask clear and focused questions to identify variables. An instrument is a sophisticated tool for measuring, monitoring, and recording quantitative data that includes customized options for questions and responses established by the researcher. Surveys, standardized examinations, and checklists are examples of research instruments that researchers might use to perform studies and collect numerical data.

3. RESULTS AND DISCUSSION

The chapter examines data revealing significant differences in pre-test and post-test scores among students, highlighting the influence of various teaching methods on knowledge acquisition and performance.

Level of Augmented Peer learning in terms of Chronological Jigsaw

This study assesses augmented peer learning, incorporating chronological, procedural, and human model jigsaw techniques, using mean and standard deviation.

Table 1 illustrates the degree of augmented peer learning utilization based on chronological jigsaw implementation. Students always employ sequential articulation (M=3.80, SD=0.48) and description of information (M=3.82, SD=0.48), alongside discussing information in order it is always easy to comprehend the sub-topic (M=3.79, SD=0.59). Additionally, they always organize information chronologically, prioritizing the importance of gathering data that helps them to improve their understanding (M=3.72, SD=0.71). These practices contribute to a consistent enhancement of respondents' understanding (M=3.75, SD=0.62). With a mean of 3.78 and a standard deviation of 0.58, the chronological jigsaw method significantly facilitated peer learning.

Participants in several research have consistently used these tactics, demonstrating their efficiency in improving understanding and efficiently organizing information.

Table 1. Level of use of Jigsaw Technique in terms of Chronological

Indicators	Mean	SD	Remarks
I used a listing in sequence of information while I was in my home group.	3.80	0.48	Always
I describe to myself in order all the information that I listed.	3.82	0.48	Always
When I am in the expert group, I discuss the information that I read in order so that it will be easy for us to understand the given sub-topic.	3.79	0.59	Always



Using chronological I can arrange the information according to its importance or based on the information accrued.	3.72	0.71	Always
Chronological (listing, describing, or discussing) information helps me to improve my understanding.	3.75	0.62	Always

Overall Mean = 3.78
Standard Deviation = 0.58
Verbal Interpretation = Very High

The findings highlight the critical role that such strategies play in improving comprehension and long-term retention of learned knowledge. This highlights the need of incorporating such effective strategies into instructional methodologies to improve learning outcomes and promote long-term mastery of learned knowledge. By incorporating these techniques into instructional procedures, educators can foster a more complete

grasp of the subject matter and long-term retention of taught content. Adopting these tactics not only improves the learning process, but also enables students to acquire strong cognitive skills that extend well beyond the classroom, promoting lifelong learning and intellectual progress.

Table 2. Level of use of Jigsaw Technique in terms of Procedural Jigsaw

Indicators	Mean	SD	Remarks
I used the art of questioning in my expert group so that we can recognize the information that are not clear.	3.67	0.65	Always
In my home group, I can easily identify the tasks that we need to do as a group.	3.76	0.59	Always
Procedures can help me identify my ideas in order.	3.78	0.54	Always
It is easy for me to perform a group activity presentation because of the procedures that I followed.	3.77	0.51	Always
In doing procedural jigsaw, I am confident about the outcome of the performance task.	2.57	1.85	Often

Overall Mean = 3.51
Standard Deviation = 1.09
Verbal Interpretation = Very High

Table 2 demonstrates the extent of augmented peer learning utilization about procedural jigsaw methodology. It indicated that students always pose questions to enhance their comprehension (M=3.67, SD=0.65), they are always able to recognize the collective task they need to accomplish (M=3.76, SD=0.59), a process can assist them in organizing their ideas (M=3.78, SD=0.54), they always find it easy to engage in group

activities when they adhere to procedures (M=3.77, SD=0.51) often, respondents exhibit confidence in the anticipated outcome of the performance task (M=2.57, SD=1.85). With a mean of 3.51 and a standard deviation of 1.09, the procedural jigsaw technique significantly enhances peer learning. It fosters collaborative comprehension and knowledge exchange among participants.

Table 3. Level using of use of Jigsaw Technique in terms of Model/Human Jigsaw

Indicators	Mean	SD	Remarks
It is more engaging when the human model serves as a visual aid.	3.82	0.43	Always
It provides clear explanations of the concepts.	3.76	0.52	Always
It helps me to recall the content of the information because of human model visuals.	3.77	0.57	Always
It improves my comprehension and helps me illustrate complex ideas.	3.84	0.48	Always
It helps me to be more attentive.	3.80	0.51	Always

Overall Mean = 3.80
Standard Deviation = 0.50
Verbal Interpretation = Very High

Table 3 displays the extent of augmented peer learning utilization categorized by model/human jigsaw. It's always observed that respondents exhibit high engagement when human models serve as visual aids (M= 3.82, SD=0.43). They always receive clear explanations of concepts (M=3.76, SD=0.52), aiding in their recall of information (M=3.77, SD=0.57). Furthermore, it consistently enhances their comprehension and facilitates the illustration of complex ideas (M= 3.84, SD = 0.48), while also promoting attentiveness

(M=3.80, SD = 0.51).

With an overall mean of 3.80 and a standard deviation of 0.50, the results consistently highlight the significant efficacy of implementing the human model jigsaw method in fostering peer learning.

Human models in collaborative learning have proven effective in fostering active engagement, knowledge exchange,



comprehension improvement, and social-emotional skills among Araling Panlipunan learners.

Augmented Peer-Learning

In this study features of different types of jigsaws comprised active participation, engagement and motivation, diversity and inclusion, and adaptability and were statistically measured by mean and standard deviation.

Table 4. Level of Augmented Peer learning in terms of Active Participation

Indicators	Mean	SD	Remarks
I actively participated in sharing my ideas with my home group and expert group.	3.83	0.44	Always
I exert extra effort to help my classmates when they are having a hard time understanding the information.	3.83	0.45	Always
I was eager to participate because these techniques are new to me.	3.74	0.57	Always
I am actively participating in doing the procedures that I list down to our performance task.	3.82	0.50	Always
I was very attentive in listening to my classmates' performance so that I could understand the sequencing of information.	3.76	0.59	Always

Overall Mean = 3.80
Standard Deviation = 0.51
Verbal Interpretation = Very High

Table 4 displays data concerning the level of engagement with different aspects of various Jigsaw techniques, particularly emphasizing active participation. Students consistently demonstrate active participation by exchanging ideas with both home and expert groups (M=3.83, SD=0.44) as well as by showing a willingness to assist classmates struggling with comprehension (M=3.83, SD=0.45). Moreover, the novelty of the techniques appears to motivate participants to engage enthusiastically (M=3.74, SD=0.57), learners consistently adhere to the procedures for the performance task (M=3.82, SD=0.50), and remain attentive while listening to their classmates' performances (M=3.76, SD=0.59).

The overall mean of 3.80 and the standard deviation of 0.51 it is evident that various types of jigsaw techniques have facilitated a remarkably high level of active participation among

participants, demonstrating consistent engagement throughout different facets of the learning process. Jigsaw methodologies promote interactive learning, encouraging active participation from learners throughout the process, and highlighting their versatility and effectiveness in fostering collaborative and participatory learning experiences. Recent research highlights the significant impact of this active involvement.

This incisive study provides light on the positive effects of peer learning methodologies in educational settings, demonstrating that collaborative interactions among students may successfully improve their grasp of historical themes while also encouraging the development of higher-order thinking skills.

These findings highlight the value of integrating peer learning practices as a pedagogical tool for enriching students' learning experiences and promoting academic accomplishment.

Table 5. Level of Augmented Peer learning in terms of Engagement and Motivation

Indicators	Mean	SD	Remarks
The new techniques motivate me to focus on my learnings.	3.82	0.43	Always
New techniques make me enthusiastic to exert effort to understand the information well.	3.86	0.36	Always
I felt dominant in my learning process.	3.81	0.45	Always
I enjoyed doing the types of jigsaw techniques.	3.82	0.49	Always
I am motivated to do the task with more effort than what's expected.	3.82	0.47	Always

Overall Mean = 3.82
Standard Deviation = 0.44
Verbal Interpretation = Very High

Table 5 presents data regarding the degree of involvement with various facets of different Jigsaw techniques, with a particular emphasis on engagement and motivation. It indicates that the newly introduced technique was found to be motivating for learning (M=3.82, SD=0.43) and encouraged participants to exert effort in understanding the information (M=3.86, SD=0.36). Participants consistently felt empowered in their learning process (M=3.81, SD=0.45) and enjoyed the variety of Jigsaw techniques (M=3.82, SD=0.49), as well as exerting effort beyond the expected level (M=3.82, SD=0.47). With a

mean of 3.82 and a standard deviation of 0.44, the diverse jigsaw techniques significantly enhance learner engagement and motivation.

They indicate a strong willingness and enthusiasm to delve into the subject matter and actively contribute to learning. These methods accommodate various learning styles and preferences, fostering active participation and collaboration among students. This heightened engagement aligns with the principles of inquiry-based learning, as advocated by Slavit et al. (2018),



where students collaboratively construct knowledge and solve historical puzzles with their peers.

Table 6. Level of Augmented Peer learning in terms of Diversity and Inclusion

Indicators	Mean	SD	Remarks
In using the different types of jigsaw techniques caters to our differences in learning style.	3.75	0.57	Always
The different types of jigsaw techniques give equal opportunities for us students to learn.	3.80	0.42	Always
I am open to considering the ideas of my classmates.	3.83	0.44	Always
I am fair-minded when evaluating suggestions from my classmates to improve my performance. I am comfortable sharing my ideas and suggestions regarding the given task.	3.77	0.51	Always

Overall Mean = 3.79

Standard Deviation = 0.50

Verbal Interpretation = Very High

Table 6 presents data regarding the degree of involvement with various facets of different Jigsaw techniques, with a particular emphasis on diversity and inclusion. This suggests that it accommodates variations in learning styles (M=3.75, SD=0.57) and provides equitable opportunities for all students to learn (M=3.80, SD=0.42). Participants demonstrate openness to considering others' ideas (M=3.83, SD=0.44) and exhibit fairness in evaluating suggestions from peers to enhance their performance (M=3.83, SD=0.44). Additionally, they express

comfort in sharing ideas and suggestions related to the assigned task (M=3.77, SD=0.51).

With an overall mean of 3.79 and a standard deviation of 0.50, the varied implementation of jigsaw techniques significantly fosters diversity and inclusivity among learners. These techniques accommodate and celebrate diverse learning styles and backgrounds, promoting collaboration, empathy, and mutual respect.

Table 7. Level of Augmented Peer learning in terms of Adaptability

Indicators	Mean	SD	Remarks
I can easily adapt to the new learning technique that my teacher instructed.	3.80	0.44	Always
I am flexible to follow the step-by-step process to help me explore more.	3.73	0.59	Always
Using the chronological, procedural, and human models, helps me to adapt to different learning environments.	3.88	0.46	Always
It helps me to assess my strengths and weaknesses in terms of my learning.	3.78	0.51	Always
Following the step-by-step process enables me to offer favorable assessments in my learning experience.	3.79	0.45	Always

Overall Mean = 3.80

Standard Deviation = 0.49

Verbal Interpretation = Very High

Table 7 provides insights into the level of engagement with various aspects of different Jigsaw techniques, focusing particularly on adaptability. This indicates that learners can readily adapt to the new learning techniques introduced by the teacher (M=3.80, SD=0.44) demonstrating flexibility in following step-by-step processes (M=3.73, SD=0.59). Employing chronological, procedural, and human models aids them in adjusting to diverse learning environments (M=3.88, SD=0.46) while they can easily evaluate their strengths and weaknesses in terms of learning (M=3.78, SD=0.51).

findings imply that incorporating Jigsaw approaches into instructional methodology improves learners' flexibility and promotes their performance in diverse learning situations. Jigsaw approaches can help instructors create a dynamic learning environment that stimulates cooperation, critical thinking, and mutual respect among students.

This strategy not only encourages academic success, but it also provides students with critical skills for navigating and flourishing in today's increasingly varied and interconnected society.

Moreover, adhering to step-by-step procedures enables them to provide favorable assessments of their learning experiences (M=3.79, SD=0.45).

As a result, incorporating Jigsaw ideas into educational procedures has enormous promise for empowering students to flourish academically and thrive in different learning environments.

This personalized approach enables educators to adjust



instructional strategies and activities to individual learners' particular strengths and limits, resulting in a learning environment that is highly responsive to each student's requirements. This technique helps learners not only achieve academic achievement but also acquire skills and confidence.

Level of Knowledge Acquisition

In this study student's knowledge acquisition includes visual literacy, critical thinking and collaboration and were statistically measured by mean and standard deviation.

Table 8. Level of knowledge acquisition of the Grade 9 students in terms of Visual Literacy

Indicators	Mean	SD	Remarks
It is easy for me to understand the lesson when there are available images, diagrams, and infographics.	3.82	0.47	Always
I successfully utilized visual information provided by the human model.	3.78	0.56	Always
The visual information provided by the human model is appropriate and aligned to the given task.	3.77	0.50	Always
Visual literacy through human models contributes to a more comprehensive understanding of complex concepts.	3.84	0.62	Always
I am confident in interpreting and understanding the visual information provided.	3.77	0.48	Always

Overall Mean = 3.79

Standard Deviation = 0.53

Verbal Interpretation = Very High

Table 8 provides insights into students' perspectives regarding their acquisition of knowledge in visual literacy. Consistently, students express that visual aids facilitate easy comprehension of lessons (M=3.82, SD=0.47) and they effectively utilize visual information provided by human models (M=3.78, SD=0.56) the visual information provided by the human model is deemed suitable and relevant to the assigned task (M=3.77, SD=0.56). Moreover, they perceive that visual literacy, particularly through human models, significantly contributes to their comprehensive understanding of complex concepts (M=3.84, SD=0.62). Additionally, students demonstrate

confidence in interpreting and understanding visual information, finding it suitable for the in given tasks (M= 3.77, SD=0.48).

The overall mean of 3.79 and the standard deviation of 0.53 it becomes evident that students exhibit a high level of knowledge acquisition in visual literacy. Students in the study recognize the significant role played by visual aids and the information conveyed by human models in enhancing their comprehension of lessons and intricate concepts.

Table 9. Level of knowledge acquisition of the Grade 9 students in terms of Critical Thinking

Indicators	Mean	SD	Remarks
I can analyze and think critically based on the information given.	3.76	0.50	Always
Chronological and procedural jigsaw helps me to break down the information given into smaller parts, and I can analyze each component.	3.72	0.54	Always
Based on my experience in using the types of jigsaw I can critically evaluate the information, conclude, or form opinions.	3.76	0.58	Always
Through using the different types of jigsaw the information that I gain is credible and reliable.	3.77	0.53	Always
Using these types of jigsaw I develop my critical thinking skills.	3.81	0.49	Always

Overall Mean = 3.76

Standard Deviation = 0.53

Verbal Interpretation = Very High

Table 9 presents insights from students regarding their level of knowledge acquisition regarding critical thinking. Students consistently noted their ability to analyze and think critically based on provided information (Mean=3.76, SD=0.50). They find that employing chronological and procedural methods helps them break down information into smaller parts for analysis (M=3.72, SD=0.54). Additionally, utilizing various types of jigsaw techniques enables them to critically evaluate information and formulate conclusions or opinions (M=3.76, SD=0.58). Students also perceive that the use of different types of jigsaw methods enhances the credibility and reliability of the

information they acquire (M=3.77, SD=0.53). Furthermore, they believe that employing these jigsaw techniques contributes to the development of their critical thinking skills (M=3.81, SD=0.49).

The overall mean score of 3.76, with a standard deviation of 0.53, suggests that students have achieved a high level of knowledge acquisition in critical thinking. This indicates a strong recognition from students regarding their ability to engage in critical analysis, especially when confronted with information.



These methods facilitate the breakdown of information into manageable components, thereby assisting students in effectively dissecting and analyzing complex concepts to improve students' critical thinking abilities, educators should

utilize teaching techniques and frameworks that prioritize student involvement and creativity.

Table 10. Level of knowledge acquisition of the Grade 9 students in terms of Collaboration

Indicators	Mean	SD	Remarks
Collaborating with others helps me learn new concepts or tackling challenges	3.78	0.50	Always
I am active in listening and seeking clarification when needed.	3.74	0.54	Always
I am sharing ideas and accepting feedback openly and respectfully in collaborative work.	3.82	0.41	Always
I am responsible for my assigned roles and tasks given.	3.84	0.45	Always
Despite our differences in learning styles, collaborative work facilitated deeper learning and understanding.	3.79	0.46	Always

Overall Mean = 3.80

Standard Deviation = 0.48

Verbal Interpretation = Very High

Table 10 presents insights from students regarding their level of knowledge acquisition regarding collaboration. It shows that students always help them learn new concepts when collaborating with others (Me=3.78, SD=0.50). They are always active in listening and seeking clarification when there is a collaboration (M=3.74, SD=0.54). Additionally, sharing ideas and accepting feedback openly and respectfully always adhere when they are collaborating (M=3.82, SD=0.41).

Students are always responsible for the assigned task given (M=3.84, SD=0.45). Furthermore, despite their differences in learning styles, collaborative work facilitated deeper learning and understanding for them. (M=3.79, SD= 0.46).

With the overall mean score of 3.80, with a standard deviation of 0.48 suggests that students have achieved a high level of knowledge acquisition when doing collaborative work.

Table 11. Pre-test scores of the students before using Augmented Peer-Learning

Scores	Frequency	Percentage	Remarks
25-30	0	0.00%	Outstanding
19-24	3	2.48%	Very Satisfactory
13-18	31	25.62%	Satisfactory
7-12	82	67.77%	Fairly Satisfactory
0-6	5	4.13%	Needs Improvement

Overall Mean = 11.01

SD = 3.27

Verbal Interpretation = Fairly Satisfactory

Table 11 presents the pre-test scores of students before using augmented peer learning, along with their frequencies and percentages. Most students (67.77%) fell into the Fairly Satisfactory range (7-12), suggesting that most students had a moderate level of performance. A significant portion of students (25.62%) scored in the Satisfactory range (13-18), indicating a reasonable level of performance for this group. A small proportion of students (2.48%) achieved a Very Satisfactory performance (19-24). A few students (4.13%)

scored in the lowest range (0-6), indicating a need for improvement in their performance.

The overall result shows that the pre-test scores suggest that while most students performed fairly satisfactorily, there is also a notable portion that requires improvement. This highlights the potential for enhancement through the implementation of augmented peer learning strategies.

Table 12. Post-test scores of the students after using Augmented peer-Learning

Scores	Frequency	Percentage	Remarks
25-30	6	4.96%	Outstanding
19-24	45	37.19%	Very Satisfactory
13-18	61	50.41%	Satisfactory
7-12	15	12.40%	Fairly Satisfactory
0-6	0	0.00%	Needs Improvement

Overall Mean = 17.58

SD = 4.14

Verbal Interpretation = Satisfactory



Table 12 presents the pre-test scores of students before using augmented peer learning, along with their frequencies and percentages. Many students (50.41%) fell into the Satisfactory range (13-18), suggesting that most students had a satisfactory level of performance. A significant portion of students (37.19%) scored in the Very Satisfactory range (19-24), indicating a reasonable level of performance for this group. A small proportion of students (4.96%) achieved an Outstanding performance (25-30). A few students (12.40%) scored in the Fairly Satisfactory (7-12), indicating that there is an improvement in their performance. Overall, the post-test scores suggested that most students performed Satisfactory, there is also a notable portion that still requires improvement.

It highlights the tremendous room for improved with augmented peer learning methods. Pre-and post-test scores are a critical way of nominating the efficacy of educational

interventions and evaluating student learning outcomes. Moreover, the peer-to-peer exercises APL enabled students to explain concepts to one another, thereby increasing their own understanding and consolidating the material by giving it practical meaning.

This data-driven approach not only serves as the foundation for evidence-based decision-making, but it also provides educators with the flexibility to modify and enhance teaching strategies to meet their students' various requirements. Using post-test scores and performing comprehensive assessments of educational interventions, educators may get useful insights into the success of their teaching techniques and suggest areas for improvement. This iterative process of reflection and adjustment fosters a culture of continuous improvement, wherein educators are committed to refining their practices to enhance student learning outcomes.

Table 13. Significant effect of the Grade 9 learners on the jigsaw technique and knowledge acquisition

Types of Jigsaw Technique	Knowledge acquisition	Beta	SE	95 % CI		β	P	
				LL	UL			
Chronological	Visual Literacy	-0.021	0.060	-0.140	0.098	-0.023	0.726	
		Procedural	-0.003	0.043	-0.089	0.083	-0.005	0.944
		Human Model	0.122	0.095	-0.067	0.311	0.095	0.204
Chronological	Critical Thinking	-0.076	0.069	-0.213	0.061	-0.070	0.273	
		Procedural	0.014	0.050	-0.084	0.113	0.019	0.776
		Human Model	0.232	0.110	0.015	0.449	0.156	0.036*
Chronological	Collaboration	0.141	0.070	0.002	0.279	0.154	0.047*	
		Procedural	0.019	0.050	-0.080	0.119	0.031	0.700
		Human Model	0.057	0.111	-0.164	0.277	0.045	0.611

Note: * $p < .05$.

Table 13 presents the results of a statistical analysis examining the significant effect between different types of Jigsaw techniques and knowledge acquisition across various dimensions. Among the types of jigsaw techniques, the human model shows a statistically significant positive effect on critical thinking ($p=0.036$), with a beta coefficient of 0.232. This suggests that utilizing the human model technique is associated with a significant improvement in visual literacy compared to other techniques. In terms of chronological jigsaw, collaboration also shows a positive significant effect ($p=0.047$) with a beta coefficient of 0.141 where ($p<0.05$).

In conclusion, the identified significant effects of the human model and chronological jigsaw techniques on critical thinking and collaboration, respectively, underscore students' potential to enhance student learning experiences. Jigsaw encourages collaboration among students, as they work together to master the entire content by sharing their expertise.

In conclusion, the intentional incorporation of human models and chronological jigsaw approaches into teaching practices is a multidimensional approach with far-reaching implications. This inclusive pedagogical technique does more than just improve critical thinking and teamwork; it also fosters a lively and dynamic learning environment in which students are empowered to actively participate in their education.

Simultaneously, using chronological jigsaw approaches promotes collaborative learning experiences that foster cooperation, communication, and problem-solving abilities. Ultimately, the combination of human models with chronological jigsaw procedures creates a strong instructional paradigm that goes beyond teaching standards. It enables educators to build an immersive learning experiences for students that foster curiosity, creativity, and lifelong learning, creating the framework for the next generation.



Table 14. Significant effect of Grade 9 learners of augmented peer-learning and knowledge acquisition

Augmented Peer-Learning	Knowledge Acquisition	Beta	SE	95 % CI		β	P
				LL	UL		
Active Participation		0.018	0.096	-0.173	0.209	0.015	0.850
Engagement and Motivation	Visual Literacy	0.634	0.100	0.435	0.833	0.506	0.000*
Diversity and Inclusion		0.168	0.087	-0.003	0.340	0.163	0.044*
Adaptability		0.199	0.091	0.019	0.379	0.168	0.031*
Active Participation		0.111	0.111	-0.108	0.331	0.078	0.318
Engagement and Motivation	Critical Thinking	0.202	0.115	-0.027	0.430	0.138	0.083
Diversity and Inclusion		0.335	0.099	0.138	0.532	0.280	0.001*
Adaptability		0.460	0.104	0.253	0.666	0.334	0.000*
Active Participation		-0.052	0.112	-0.275	0.171	-0.043	0.645
Engagement and Motivation	Collaboration	0.128	0.117	-0.103	0.360	0.104	0.275
Diversity and Inclusion		0.194	0.101	-0.006	0.394	0.191	0.057
Adaptability		0.474	0.106	0.264	0.683	0.408	0.000*

Note: * $p < .05$.

Table 14 presents the results of a statistical analysis examining the significant effect between augmented peer-learning and knowledge acquisition across various dimensions.

Within the attributes of the jigsaw technique, engagement, and motivation exhibit a statistically notable positive effect on visual literacy ($p=0.000$), with a beta coefficient of 0.634. This indicates that engagement and motivation are linked to a substantial enhancement in visual literacy compared to other characteristics. Regarding critical thinking, adaptability similarly demonstrates a positive significant effect ($p=0.000$) with a significance level of ($p < 0.05$). Lastly, collaboration also displays a positive significant effect ($p=0.000$) with a significance level of ($p < 0.05$).

In conclusion, the identified significant effects of the features of types of jigsaw on visual literacy, critical thinking, and collaboration, respectively, underscore students' potential to enhance student learning experiences. By pushing students to

collaborate in order to fully comprehend the material, the Jigsaw approach promotes student collaboration.

Students who teach and learn from one another not only improve their own understanding but also acquire vital abilities like critical thinking, cooperation, and communication. By fostering a shared and dynamic learning environment, this collaborative method improves educational outcomes for both individuals and the group as a whole.

Lester highlights that by involving several cognitive processes, visual analysis promotes a deeper comprehension and memory of the material. Through critical analysis of graphics, students may draw conclusions, link ideas, and notice details that they would miss in text-based material. Because of this, visual analysis is not only an essential ability in the current information era but a very helpful teaching strategy that improves critical thinking.

Table 15. Significant differences between pre-test and post-test scores of the students

Performance	Pre-test		Post-test		Mean Difference	T	df	P
	M	SD	M	SD				
Scores	11.01	3.27	17.58	4.14	6.57	-19.86	120	0.000*

Note: * $p < .05$.

Table 15 shows the significant difference in the pre-test and post-test scores of the students. There is a significant difference between the pre-test and post-test scores of the students showing (M= 11.01) in the pretest and (M=17.58) in the post-test. This means that there was a substantial improvement in student's performance from the beginning to the end of the

instructional intervention. The jigsaw technique promotes active engagement among students by requiring them to work collaboratively, share knowledge, and teach each other. This active involvement in the learning process is known to enhance understanding and retention of information.



Additionally, students can refine their critical thinking skills. By infusing the learning environment with elements of excitement and novelty, educators can ensure that the educational experience remains engaging and captivating, thereby preventing boredom and fostering a deeper level of student involvement.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, the following conclusions were made it was shown that the different types of jigsaw techniques in terms of chronological, procedural, and model/human, are all very high; augmented peer-learning in terms of active participation, engagement and motivation, diversity and inclusion, and adaptability are all very high; knowledge acquisition in terms of visual literacy, critical thinking, and collaboration were all very high; pre-test scores suggest that most of students performed fairly satisfactorily; post-test scores most of the students performed satisfactory.

In the types of jigsaw technique, human model shows a statistically significant positive effect on critical thinking. This suggests that utilizing the human model technique is associated with a significant improvement at 0.05 level of significance in visual literacy compared to other techniques. Within the augmented peer-learning, engagement and motivation exhibit a statistically notable significant effect at 0.05 level of significance on visual literacy. This indicates that engagement and motivation are linked to a substantial enhancement in visual literacy compared to other characteristics. While critical thinking, adaptability, and collaboration show a significant positive effect, and it shows that there is a significant difference at 0.05 level of significance between the student's pre-test and post-test, and there is a substantial improvement in student performance from the beginning to the end of the technique intervention. It also shows that there is a significant difference in knowledge acquisition before and after using augmented peer learning with different types of jigsaw. Also, it was shown that there is an effect on the student's performance after using augmented peer learning in different types of jigsaw.

Furthermore, it shows that significant difference on pre-test and post-test were identified and the significant effect as well on augmented peer-learning and jigsaw technique on knowledge acquisition. Therefore, all the hypotheses were rejected.

This suggests that using enhanced peer-learning methodologies in teaching Araling Panlipunan 9 can be quite beneficial. Not only promotes a participatory and collaborative learning environment, but it also greatly improves students' capacity to openly communicate their views and ideas.

Additionally, by fostering a community of support in the classroom, this approach enhances the learning environment overall by allowing students to feel more at ease researching and sharing their knowledge.

Based on the findings, the following were recommended for consideration:

1. Teachers may use differentiated instructions and offer multiple pathways to learning like different types of

jigsaw techniques that will help the students to be responsible with their learning.

2. Teachers may establish a welcoming environment in the classroom where students are inspired to boldly explore new ideas, ask questions, and share their thoughts. Recognize and value each student's unique experiences, backgrounds, and viewpoints.
3. Since the research revealed a significant positive effect on student performance using various types of jigsaw techniques in Araling Panlipunan 9, the researcher recommends that teachers may incorporate these techniques into their daily classroom instruction.

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RELATIONSHIP OF SCHOOL ADMINISTRATORS' LEADERSHIP AND SCHOOL CULTURE TO TEACHERS' JOB SATISFACTION

Earl Anthony B. Tubillo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study aimed to determine the relationship between the administrators' leadership and school culture to teachers' job satisfaction. The study described the leadership style of school administrators it also illustrated the level of administrators' school culture and the level of teachers' job satisfaction. More importantly, it correlated the school administrators' leadership style and school culture to teachers' job satisfaction.

The study used descriptive correlational design. The focus of the study was 30 School Administrators and 135 teachers from private schools in Canlubang, Calamba City, Laguna. Specifically

Based on the findings, the study implied that the relationship between school administrators' leadership styles and teachers' job satisfaction was complex and context-dependent. And on the other hand, it implied that as school administrators' role in the school culture in terms of affiliative collegiality increases, there was a greater increase in the teachers' job satisfaction in terms of relationship with superiors and colleagues. It also suggested the importance of school administrators' role in shaping school culture, particularly in fostering affiliative collegiality among staff members. The moderately positive significant relationship between administrators' promotion of affiliative collegiality and teachers' job satisfaction, specifically in terms of relationships with superiors and colleagues, underscored the importance of cultivating a positive work environment characterized by trust, collaboration, and mutual support.

It was concluded that as school administrators' leadership style increases, there was no increase/decrease in the teachers' job satisfaction, this led to the acceptance of the null hypothesis. It implied that regardless of how administrators led the school, whether it be through an authoritarian, democratic, transformational, or other leadership style, it did not have a measurable impact on teachers' job satisfaction. It was concluded that only one variable in school administrators' role in the school culture was observed that had significant effect on the teachers' job satisfaction, it showed that as in terms of affiliative collegiality increased, there was a greater increase in the teachers' job satisfaction in terms of relationship with superiors and colleagues. It's essential to consider the limitations of the study and the specific context in which the findings were obtained. Factors such as the size and demographics of the school, the leadership practices of administrators, and the measures used to assess affiliative collegiality and job satisfaction may impact the generalizability of the findings. The findings led to the acceptance of the null hypothesis.

Among the recommendations were that the school leaders may choose among the leadership styles which was appropriate to their context and may be beneficial among their teachers and learners for them to perform better. School leaders should offer a capacity building or program that may enhance more the school culture being practice in their institution. Teachers should prioritize the enhancement of the mentioned variables in terms of their job satisfaction for their own good. Likewise, they may propose a program to help them better

KEYWORDS: *administrators' leadership; school culture; teachers' job satisfaction*

1. INTRODUCTION

A school's performance was heavily influenced by the administrators leadership and school culture. This excellence was attributable to the teachers who set the standard in the classroom. Generally, high-quality teachers were the product of a comprehensive and intensive education during their teacher training, which enabled them to develop excellent personalities and knowledge of all subject matter within their areas of specialization (Hamidah Yusof, 2014).

Job satisfaction significantly affected the school's total commitment and output. Their enjoyment of their work strengthened the teachers' commitment to the organization. Teachers that were content with their jobs were committed to remaining with the organization. Employers were happier in

their positions the more their engagement and commitment to the organization. Student performance was influenced by job satisfaction, so educational growth must raise these two standards. Consequently, teachers' job satisfaction or enjoyment affected the school's success.

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Job satisfaction significantly impacted the school's total commitment and output. Their enjoyment of their work strengthened the teachers' commitment to the organization. Teachers that were content with their jobs were committed to remaining with the organization. Employers were happier in their positions the more their engagement and commitment to the organization. Student performance was influenced by job satisfaction, so educational growth must raise these two standards. Consequently, instructors' job satisfaction or enjoyment affects the school's success.

Culture significantly impacted the collective decisions and actions of members of an organization and individual pupils. In addition, the school's culture promotes order and decreases staff anxiety and discontent (Belias and Koustelios, 2014). 2014 (Belias and Koustelios) (Belias and Koustelios). Inadequate management of the school's culture impacted the severity of social problems, the academic progress of pupils, and their safety. If the school's culture was to stay positive, it must be consistently upheld. If the school's culture deteriorates, school leadership must make adjustments (Taahyadin and Daud,2018).

A highly satisfied teacher gave their best to nurture the learners' minds. Teachers' job satisfaction was associated with school administrators' leadership concerning school culture.

1.1 Statement of the Problem

Specifically, the study sought answers to the following research questions:

1. What is the level leadership style of the school administrators with regards to:
 - 1.1 Servant Leadership;
 - 1.2 Transactional Leadership;
 - 1.3 Transformational Leadership;
 - 1.4 Visionary leadership; and
 - 1.5 Democratic Leadership?
2. What is the level of School Administrators' School Culture in terms of:
 - 2.1. Professional Collaboration;
 - 2.2. Affiliative Collegiality; and
 - 2.3. Continuous Improvement and Lifelong Learning?
3. What is the level of teachers' job satisfaction in terms of:
 - 3.1. Security;
 - 3.2 Work Environment;
 - 3.3 Work-life balance; and
 - 3.4 Relationship with Superiors and Colleagues?
4. Is there a significant relationship between School Administrators' Leadership style, to teachers' job satisfaction?
5. Is there a significant relationship between School Culture in Teachers' Job Satisfaction?

2. METHODOLOGY

To get a significant result, a certain method and design was used in doing the study. In this study, the correlational was utilized

in this study where the major objective was to identify the relationship between school administrators' leadership and school culture to teachers' job satisfaction.

Shona McCombes (2019) said that the correlational research aimed to accurately and systematically describe groups of people, situations, or things. One can answer questions like what, where, when, and how, but not why. Several different descriptive research methods can be used to examine one or more variables. In observational research, on the other hand, the researcher did not control or change any of the variables. Instead, they watch and measure them. A descriptive study design was a type of scientific research that involved watching how people act and describing it in words without changing it. The researcher used random sampling. Thomas (2019) said that a simple random sample was a part of a population picked randomly. Using this method, every person in the population had the same chance of being chosen.

3. RESULTS AND DISCUSSION

This chapter showed the presentation, analyses, and interpretation of the data tabulated and gathered.

The main goal of this research was to analyze the level of the leadership style of the school administrators on how it affected to the teachers job satisfaction. It also assessed the level of school administrators in terms of the school culture. Next was to assess the level of teachers' job satisfaction. More importantly was to analyze the relationship between school administrators' leadership to teachers' job satisfaction and school culture to teachers' job satisfaction. It comprehended how various facets of school culture and leadership affect teachers' satisfaction with their work, which was a crucial factor in determining organizational performance and teacher retention. It sought to provide practical insights to guide leadership practices, organizational policies, and professional development programs in schools by investigating the complex relationships among job satisfaction indicators, school culture characteristics, and leadership styles. The exploration of these interrelated variables provided valuable insights into the complex dynamics within educational institutions and their impact on the well-being and effectiveness of teachers. The researcher hoped to add to the increasing body of information about the dynamics of school leadership, culture, and teacher job satisfaction by using this thorough approach to data presentation, analysis, and interpretation. This study aimed to inform evidence-based practices and policies targeted at improving the quality of educational experiences and outcomes for both teachers and students. The researcher did this by generating new paths for investigation and by revealing practical insights.

Level Leadership Style

The level leadership style of the school administrators with regards to servant leadership, transactional leadership, transformational leadership, visionary leadership and democratic leadership, was treated statistically using mean and standard deviation.



Table 1. Level of Leadership Style in Terms of the School Administrators with Regards to Servant Leadership

<i>I, as a school administrator ...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...pay attention to what is being said by the teachers and co-administrators, the actual meaning being conveyed by the words, and the feelings being exchanged.</i>	3.07	0.83	Agree
<i>...lead from a value-based, principle-centered position of moral authority.</i>	2.80	0.76	Agree
<i>...understand personal biases and set them aside for the benefit of the team.</i>	3.00	0.83	Agree
<i>...persuade and influence the team to convince them rather than coerce them.</i>	2.90	0.88	Agree
<i>...have faith in the worth of people and help their team to see teachers own potential.</i>	3.17	0.91	Agree
<i>Weighted Mean</i>	2.99		
<i>SD</i>	0.84		
<i>Verbal Interpretation</i>	High		

Table 1 showed the level leadership style of the school administrators with regards to servant leadership. Also showed the statements, mean, standard deviation and remarks. From the statements above, “...have faith in the worth of people and help their team to see teachers own potential.” yielded the highest mean score ($M=3.17$, $SD=0.91$) and was remarked as Agree. On the other hand, the statement “...lead from a value-based, principle-centered position of moral authority” received the lowest mean score of responses with ($M=2.80$, $SD=0.76$) yet was also remarked Agree.

The level leadership style of the school administrators with regards to servant leadership attained a weighted mean score of 2.99 and a standard deviation of 0.84, verbally interpreted as high among the respondents.

This implied that the high level of servant leadership in school administrators, when combined with the level leadership style, can create a positive and inclusive environment that fosters the growth and success of both teachers and students. By verbally interpreting this approach as emphasizing empathy, trust, collaboration, empowerment, and continuous learning, school leaders can effectively serve their communities and make a lasting, positive impact on education.

Table 2. Level Leadership Style in Terms of the School Administrators with Regards to Transactional Leadership

<i>I, as a school administrator ...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...focus on short term goals.</i>	3.03	1.03	Strongly Agree
<i>...impose my own orders and instructions on the employees.</i>	2.93	0.74	Strongly Agree
<i>...oppose changes and less prioritize creativity and innovation.</i>	2.67	0.84	Strongly Agree
<i>...take for granted the empowerment of the employees.</i>	2.77	0.90	Strongly Agree
<i>...enjoy efficiency</i>	2.93	0.78	Strongly Agree
<i>Weighted Mean</i>	2.87		
<i>SD</i>	0.86		
<i>Verbal Interpretation</i>	High		

Table 2 showed the level leadership style of the school administrators with regards to transactional leadership. Also showed the statements, mean, standard deviation and remarks.

“...oppose changes and less prioritize creativity and innovation” received the lowest mean score of responses with ($M=2.67$, $SD=0.84$) yet was also remarked Strongly Agree.

From the statements above, “...focus on short term goals.” yielded the highest mean score ($M=3.03$, $SD=1.03$) and was remarked as Strongly Agree. On the other hand, the statement

The level leadership style of the school administrators with regards to transactional leadership attained a weighted mean score of 2.87 and a standard deviation of 0.86, verbally



interpreted as high among the respondents.

This interpretation suggested that, based on the weighted mean score, transactional leadership was perceived to be high among the respondents. In other words, respondents generally believe that school administrators demonstrate a considerable emphasis on transactional leadership practices, such as setting clear expectations, providing rewards for performance, and administering consequences for non-compliance. This meant that school leadership focusing on transactional leadership putting emphasis on the value of structure, organization, supervision, output, and performance may achieve the goals set by the group. This type of leadership included motivation coming from the administrator which was a way to perform well to receive benefits and incentives. With this approach it can be realized that the school leaders can provided a better

avenue and workplace for their teachers and learners.

The level of leadership style of the school administrators with regards to transactional leadership attained a weighted mean score of 2.87 and a standard deviation of 0.86, verbally interpreted as high among the respondents.

By offering rewards for desired behavior and sanctions for deviations, transactional leaders created a structured and predictable work environment that prioritizes efficiency, accountability, and performance. This emphasis on order and control aligns with the perceptions of respondents in the study, who perceived transactional leadership as prevalent among school administrators. When there is a significant effort given to the employees it also give way to work well.

Table 3. Level Leadership Style in Terms of the School Administrators with Regards to Transformational Leadership

<i>I, as a school administrator ...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...encourage innovative thinking by emphasizing new experiences and growth opportunities.</i>	3.27	0.69	Strongly Agree
<i>...build positive relationships by mentoring employees and helping each person understand their value and potential.</i>	3.03	0.89	Agree
<i>...model a vision for the organization, the team and for employees to emulate and make their own.</i>	3.07	0.78	Agree
<i>...model expectations and actions for employees, earning their trust and respect.</i>	3.03	0.85	Agree
<i>...hear ideas with an open mind and respond without judgment or finality.</i>	3.10	0.84	Agree
<i>Weighted Mean</i>	<i>3.10</i>		
<i>SD</i>	<i>0.81</i>		
<i>Verbal Interpretation</i>	<i>High</i>		

Table 3 showed the level leadership style of the school administrators with regards to transformational leadership. Also showed the statements, mean, standard deviation and remarks.

From the statements above, “...encourage innovative thinking by emphasizing new experiences and growth opportunities.” yielded the highest mean score ($M=3.27$, $SD=0.69$) and was remarked as Strongly Agree. On the other hand, the statement “...build positive relationships by mentoring employees and helping each person understand their value and potential” received the lowest mean score of responses with ($M=3.03$, $SD=0.89$) yet was also remarked Agree.

The level leadership style of the school administrators with regard to transformational leadership attained a weighted mean score of 3.10 and a standard deviation of 0.81, verbally

interpreted as high among the respondents. The high-level transformational style of the school administrators proved that innovation and technological trends were being practiced by the school leaders. This strategy was a good manifestation that employees were allowed greater freedom to be imaginative, forward-thinking, and innovative in solving challenges. With this kind of leadership being practiced at school, teachers and leaders promote one another’s morality and motivation. Furthermore, by prioritizing ethical principles and fostering a sense of shared purpose, the administrators created a cohesive and values-driven environment where integrity, compassion, and empathy guide interactions and decision-making processes. This ethical framework not only strengthens trust and cohesion within the school community but also served as a foundation for meaningful and impactful educational experiences for students.



Table 4. Level Leadership Style in Terms of the School Administrators with Regards to Visionary Leadership

<i>I, as a school administrator ...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...try new ideas, activities, or processes to find unique opportunities with the ability to remain focused.</i>	2.87	0.97	Agree
<i>...am ready to challenge existing policies and institutions, even those that have been around for years or decades</i>	3.17	0.91	Agree
<i>...share strategies or how to develop actionable plans with team to help motivate them to reach their goals.</i>	3.10	0.84	Agree
<i>...take risks because they understand the challenges that may accompany change.</i>	2.93	0.74	Agree
<i>...help inspire others to enhance their focus, and suggest eliminating distractions, taking breaks in between tasks, or prioritizing important tasks.</i>	3.10	0.76	Agree
<i>Weighted Mean</i>	<i>3.03</i>		
<i>SD</i>	<i>0.85</i>		
<i>Verbal Interpretation</i>	<i>High</i>		

Table 4 showed the level leadership style of the school administrators with regards to Visionary leadership. Also showed the statements, mean, standard deviation and remarks.

From the statements above, “...help inspire others to enhance their focus, and suggest eliminating distractions, taking breaks in between tasks, or prioritizing important tasks.” yielded the highest mean score ($M=3.10$, $SD=0.76$) and was remarked as Agree. On the other hand, the statement “...try new ideas, activities, or processes to find unique opportunities with the ability to remain focused” received the lowest mean score of responses with ($M=2.87$, $SD=0.97$) yet was also remarked Agree.

The level leadership style of the school administrators with regard to Visionary leadership attained a weighted mean score of 3.03 and a standard deviation of 0.85, verbally interpreted as

high among the respondents.

This implied that the high level of visionary leadership had a good effect on the leadership style of the school leader since this type of leadership inspired a culture of cooperation and teamwork among the team by sharing their clear vision of the future. Such paved the way for the entire team to achieve challenging objectives, moreover, with creativity and meticulous planning, success was attainable.

In essence, Meade's perspective underscores the importance of vision as the cornerstone of visionary leadership. By articulating a clear and compelling vision, communicating it effectively, setting strategic goals, and actively engaging stakeholders, visionary leaders inspired collective action towards a shared future of growth, innovation, and positive impact.

Table 5. Level Leadership Style in Terms of the School Administrators with Regards to Democratic Leadership

<i>I, as a school administrator ...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...welcome and value others' input, rely heavily on team participation, and facilitate discussions that enable multiple members of their group to weigh in on decisions.</i>	2.87	0.78	Strongly Agree
<i>...seek to get a wide range of perspectives and value the free flow of ideas. Innovation and creativity are usually prioritized.</i>	3.03	0.76	Strongly Agree
<i>...ask for feedback and appreciate the opinions of others.</i>	3.03	0.81	Strongly Agree
<i>...delegate decisions to their team or trust them to take charge in certain situations.</i>	3.00	0.79	Strongly Agree
<i>...establish a strong sense of trust, which strengthens the overall culture.</i>	3.10	0.92	Strongly Agree
<i>Weighted Mean</i>	<i>3.01</i>		
<i>SD</i>	<i>0.81</i>		
<i>Verbal Interpretation</i>	<i>High</i>		



Table 5 showed the level leadership style of the school administrators with regards to democratic leadership. Also showed the statements, mean, standard deviation and remarks.

From the statements above, “...establish a strong sense of trust, which strengthens the overall culture.” yielded the highest mean score ($M=3.10, SD=0.92$) and was remarked as Strongly Agree. On the other hand, the statement “...welcome and value others’ input, rely heavily on team participation, and facilitate discussions that enable multiple members of their group to weigh in on decisions.” received the lowest mean score of responses with ($M=2.87, SD=0.78$) yet was also remarked Strongly Agree.

The level leadership style of the school administrators with regards to democratic leadership attained a weighted mean score of 3.01 and a standard deviation of 0.81, verbally interpreted as high among the respondents.

This implied that the high level of democratic leadership of the school leaders combined with group equality and the free exchange of ideas was a proof that the workplace was good, and everyone was given a chance for open communication, promotes discussion and gave everyone the chance to contribute. Even though this method emphasized group equality and free exchange of ideas, the democratic leader remains in place to provide direction and control. The democratic leader was also in charge of selecting group members and determining who can participate in decision-making.

Level of School Culture

The level of School Culture in terms of professional collaboration, affiliative collegiality and continuous improvement and lifelong learning, was treated statistically using mean and standard deviation.

Table 6. Level of School Culture in Terms of Professional Collaboration

<i>In our school, we...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...focus on a shared goal, where the student and the student’s education are the priority.</i>	3.07	0.83	Agree
<i>...acknowledge the professional expertise and competence of all.</i>	2.97	0.81	Agree
<i>...are underpinned by positive relationships built on respect, reciprocity, and effective communication</i>	2.80	0.71	Agree
<i>...share weaknesses and together we overcome them.</i>	3.00	0.87	Agree
<i>...work and exert effort together in fulfilling common goals.</i>	3.27	0.83	Strongly Agree
<i>Weighted Mean</i>	3.02		
<i>SD</i>	0.81		
<i>Verbal Interpretation</i>	High		

Table 6 showed the level of school culture of the school administrators with regards to professional collaboration. Also showed the statements, mean, standard deviation and remarks.

From the statements above, “...work and exert effort together in fulfilling common goals.” yielded the highest mean score ($M=3.27, SD=0.83$) and was remarked as Strongly Agree. On the other hand, the statement “...are underpinned by positive relationships built on respect, reciprocity, and effective communication.” received the lowest mean score of responses with ($M=2.80, SD=0.71$) yet was also remarked Agree.

The level of school culture of the school administrators with regards to professional collaboration attained a weighted mean score of 3.02 and a standard deviation of 0.81, verbally interpreted as high among the respondents.

The high level of school culture of the school administrators in

terms of professional collaboration had a significant impact as regards to the operation of the school. The enhancement of the employees’ skills through collaboration was a manifestation that teachers and other employees were in good working relationships, and this will lead to better school performance. Through collaborative efforts, employees were able to leverage their diverse skills, experiences, and perspectives to address complex challenges and capitalize on opportunities for growth and improvement. This collaborative ethos not only enhances individual skill sets but also cultivates a sense of camaraderie and shared ownership among staff members. Furthermore, the establishment of strong working relationships among teachers and other employees was a testament to the positive school culture fostered by the administrators. These relationships were characterized by trust, mutual respect, and open communication, laying the foundation for effective teamwork and collaboration.



Table 7. Level of School Culture in Terms of Affiliative Collegiality

<i>In our school, we...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...sustain positive workplace that is beneficial to all.</i>	3.17	0.79	Agree
<i>...commit to productive school that lead to school's progress.</i>	2.93	0.94	Agree
<i>...possess cooperative relationship to one another.</i>	3.07	0.91	Agree
<i>...understand individual differences and own perspectives.</i>	3.10	0.88	Agree
<i>...have strong camaraderie and genuine relationship exists.</i>	3.03	0.85	Agree
<i>Weighted Mean</i>	<i>3.06</i>		
<i>SD</i>	<i>0.88</i>		
<i>Verbal Interpretation</i>	<i>High</i>		

Table 7 showed the level of school culture of the school administrators with regards to Affiliative Collegiality. Also showed the statements, mean, standard deviation and remarks

From the statements above, “...sustain positive workplace that is beneficial to all.” yielded the highest mean score ($M=3.17$, $SD=0.79$) and was remarked as Agree. On the other hand, the statement “...commit to productive school that lead to school's progress.” received the lowest mean score of responses with ($M=2.93$, $SD=0.94$) yet was also remarked Agree.

The level of school culture of the school administrators with regards to affiliative collegiality attained a weighted mean score of 3.06 and a standard deviation of 0.88, verbally interpreted as high among the respondents.

The high level of school culture as regards affiliative collegiality can be perceived as an effective way of proving teachers a better workplace since employees showed cooperation, commitment, and camaraderie. With this relationship, then school success was possible.

Table 8. Level of School Culture in Terms of Continuous Improvement and Lifelong Learning

<i>In our school, we...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...believe that there is always a room for improvement.</i>	2.97	0.76	Agree
<i>...help facilitate the learning of all within the school.</i>	3.13	0.86	Agree
<i>...enable individuals to achieve ever varying degrees of personal and professional maturity.</i>	2.93	0.74	Agree
<i>...learn and grow professionally together.</i>	2.97	0.89	Agree
<i>overcome defeat and appreciate and ...celebrate achievements (whether big or small).</i>	3.03	0.93	Agree
<i>Weighted Mean</i>	<i>3.01</i>		
<i>SD</i>	<i>0.84</i>		
<i>Verbal Interpretation</i>	<i>High</i>		

Table 8 showed the level of school culture of the school administrators with regards to Continuous Improvement and Lifelong Learning. Also showed the statements, mean, standard deviation and remarks.

From the statements above, “...celebrate achievements (whether big or small).” yielded the highest mean score ($M=3.03$, $SD=0.93$) and was remarked as Agree. On the other hand, the statement “...enable individuals to achieve ever varying degrees of personal and professional maturity.” received the lowest mean score of responses with ($M=2.93$, $SD=0.74$) yet was also remarked Agree.

The level of school culture of the school administrators with regards to Continuous Improvement and Lifelong Learning

attained a weighted mean score of 3.01 and a standard deviation of 0.84, verbally interpreted as high among the respondents.

The high level of school culture of the school leaders as regards continuous improvement and lifelong learning meant that school excels in terms of personal and professional growth among teachers since school leaders and teachers were open to improvement and change.

Level of Teachers' Job Satisfaction

The level of teachers' job satisfaction in terms of security, work environment, work-life balance and relationship with superiors and colleagues, was treated statistically using mean and standard deviation.



Table 9. Level of Teachers' Job Satisfaction in Terms of Security

STATEMENTS...	MEAN	SD	REMARKS
<i>My compensation is appropriate to my tasks and assignments as a teacher.</i>	3.01	0.86	Agree
<i>I experience receiving rewards and merits for a job well done.</i>	3.01	0.83	Agree
<i>There is an opportunity for promotion.</i>	3.09	0.85	Agree
<i>I have stable job even in the event of crisis.</i>	2.99	0.84	Agree
<i>I am afraid of losing my teaching job.</i>	2.91	0.85	Agree
<i>Weighted Mean</i>	<i>3.00</i>		
<i>SD</i>	<i>0.85</i>		
<i>Verbal Interpretation</i>	<i>High</i>		

Table 9 showed the level of teachers' job satisfaction with regards to security. Also showed the statements, mean, standard deviation and remarks. From the statements above, "There is an opportunity for promotion." yielded the highest mean score ($M=3.09$, $SD=0.85$) and was remarked as Agree. On the other hand, the statement "I am afraid of losing my teaching job." received the lowest mean score of responses with ($M=2.91$, $SD=0.85$) yet was also remarked Agree. The level of teachers' job satisfaction with regards to security attained a weighted mean score of 3.00 and a standard deviation of 0.85, verbally interpreted as high among the respondents.

The high level of teachers' job satisfaction in terms of security meant that teacher respondents were agree and satisfied with the compensation, benefits, and opportunity that they have in their workplace. This further may served as their motivation to be contented and satisfied with what they received and likewise

be more motivated with their chosen career.

Engaged employees are more committed, innovative, and customer-focused, leading to enhanced productivity, customer satisfaction, and ultimately, financial performance. By prioritizing factors such as respect, safety, and job security, organizations can create an environment conducive to employee engagement, thereby unlocking the potential for sustained success and growth.

In summary, Miles's affirmation underscored the importance of creating a workplace culture that prioritizes respect, safety, and job security as essential drivers of employee engagement. By investing in these areas, organizations can cultivate a motivated and committed workforce, leading to improved retention rates, higher performance, and greater success in achieving organizational objectives.

Table 10. Level of Teachers' Job Satisfaction in Terms of Work Environment

STATEMENTS...	MEAN	SD	REMARKS
<i>I work for eight hours a day only and extend if there is a need.</i>	2.93	0.86	Agree
<i>The tasks and assignments given to me are manageable.</i>	2.91	0.75	Agree
<i>The administration provides equal opportunities to all.</i>	2.99	0.87	Agree
<i>The workplace is free from physical and emotional harm.</i>	3.00	0.83	Agree
<i>Conflict resolution is very evident in our organization.</i>	3.04	0.89	Agree
<i>Weighted Mean</i>	<i>2.97</i>		
<i>SD</i>	<i>0.84</i>		
<i>Verbal Interpretation</i>	<i>High</i>		

Table 10 showed the level of teachers' job satisfaction with regards to work environment. Also showed the statements, mean, standard deviation and remarks.

From the statements above, "Conflict resolution is very evident in our organization." yielded the highest mean score ($M=3.04$, $SD=0.89$) and was remarked as Agree. On the other hand, the statement "The tasks and assignments given to me are manageable." received the lowest mean score of responses with ($M=2.91$, $SD=0.75$) yet was also remarked Agree. The

level of teachers' job satisfaction with regards to work environment attained a weighted mean score of 2.97 and a standard deviation of 0.84, verbally interpreted as high among the respondents. The analysis of the survey responses reveals important insights into teachers' perceptions of their work environment and job satisfaction. Conversely, the statement "The tasks and assignments given to me are manageable" had the lowest mean score of 2.91 and a standard deviation of 0.75. Despite being the lowest, this score still falls within the "Agree" range, suggesting that teachers find their tasks and assignments



manageable, although less so compared to their views on conflict resolution.

Table 11. Level of Teachers' Job Satisfaction in Terms of Work-Life Balance

STATEMENTS...	MEAN	SD	REMARKS
<i>It is evident that we can establish a clear separation between our work and personal life.</i>	2.96	0.82	Agree
<i>We prioritize tasks and set realistic goals to be more productive at work and more relaxed during personal hours.</i>	3.02	0.87	Agree
<i>Incorporating self-care routines into daily life will be possible.</i>	2.99	0.86	Agree
<i>Flexible work arrangement is implemented if there is a need.</i>	3.07	0.84	Agree
<i>No matter how busy, taking a break is considered.</i>	2.92	0.85	Agree
Weighted Mean	2.99		
SD	0.85		
Verbal Interpretation	High		

Table 11 showed the level of teachers' job satisfaction with regards to work-life balance. Also showed the statements, mean, standard deviation and remarks.

From the statements above, "Flexible work arrangement is implemented if there is a need." yielded the highest mean score ($M=3.07$, $SD=0.84$) and was remarked as Agree. On the other hand, the statement "No matter how busy, taking a break is considered." received the lowest mean score of responses with ($M=2.92$, $SD=0.85$) yet was also remarked Agree.

The level of teachers' job satisfaction with regards to work-life balance attained a weighted mean score of 2.99 and a standard deviation of 0.85, verbally interpreted as high among the respondents.

The high level of teachers' job performance satisfaction in terms of work-life balance meant that teachers can put boundary between their personal lives and their professional lives. This manifests as well that they can manage their time well and they can manage their emotional and physical well-being. This was good practice was beneficial to teachers so they cannot sacrifice their family time.

Table 12. Level of Teachers' Job Satisfaction in Terms of Relationship with Superiors and Colleagues

STATEMENTS...	MEAN	SD	REMARKS
<i>There is camaraderie between and among the employees.</i>	2.95	0.81	Agree
<i>Empathy is being felt both from superiors and colleagues.</i>	3.12	0.81	Agree
<i>Engagement and commitment are observed among the employees.</i>	2.92	0.77	Agree
<i>Communication is open and everyone has genuine concern for all.</i>	2.91	0.83	Agree
<i>Feedback mechanism (constructive) is very evident.</i>	2.98	0.82	Agree
Weighted Mean	2.97		
SD	0.81		
Verbal Interpretation	High		

Table 12 showed the level of teachers' job satisfaction with regards to relationship with superiors and colleagues. Also showed the statements, mean, standard deviation and remarks.

From the statements above, "Empathy is being felt both from superiors and colleagues." yielded the highest mean score ($M=3.12$, $SD=0.81$) and was remarked as Agree. On the other hand, the statement "Communication is open and everyone has genuine concern for all." received the lowest mean score of responses with ($M=2.91$, $SD=0.83$) yet was also remarked Agree.

The level of teachers' job satisfaction with regard to relationship with superiors and colleagues attained a weighted mean score of 2.97 and a standard deviation of 0.81, verbally interpreted as high among the respondents.

The high level of teachers' job satisfaction with regards to relationship with superiors and colleagues manifests that teachers were satisfied and happy with the treatment that they receive particularly from their school leaders and colleagues. Good connections among the members of the team were important. Anyone who had worked in an institution should understand the importance of having good work connections. Team members who did not develop trust will struggle to contribute. Everyone suffered at work, and disagreements had a negative impact on team culture. It could even permeated the corporate culture, jeopardizing one employer's continued existence. Furthermore, the strong connections among team members were essential for fostering a cohesive and productive work environment. As anyone who has experienced institutional work dynamics can attest, the quality of interpersonal relationships significantly impacts overall job satisfaction and performance.



Table 13. Significant Relationship between School Administrators' Leadership style and Teachers' Job Satisfaction

School Administrators' Leadership style (IV)	Teachers' Job Satisfaction (DV)			
	Security	Work_E	Work-life	Relationship
Servant : Pearson Correlation	-0.24	0.07	-0.23	-0.09
Significance(2-Tailed)	.216	.728	.235	.653
N	30	30	30	30
Transactional :Pearson Correlation	-0.05	0.17	0.11	-0.12
Significance(2-Tailed)	.780	.383	.568	.531
N	30	30	30	30
Transformational :Pearson Correlation	-0.10	0.03	-0.03	0.16
Significance(2-Tailed)	.617	.899	.869	.402
N	30	30	30	30
Visionary :Pearson Correlation	-0.04	-0.31	-0.17	-0.28
Significance(2-Tailed)	.983	.103	.384	.138
N	30	30	30	30
Democratic :Pearson Correlation	0.23	0.17	0.24	0.22
Significance(2-Tailed)	.226	.370	.218	.247
N	30	30	30	30

The correlation coefficients measured the strength and direction of the relationship between school administrators' leadership style and teachers' job satisfaction in terms of security, work environment, work-life balance and relationship with superiors and colleagues. A positive correlation indicated that as school administrators' leadership style increases, teachers' job satisfaction also tends to increase.

Correlations were computed among five school administrators' leadership style on data for 30 respondents. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicated a perfect negative correlation.

The correlation coefficients range from -0.28 to 0.24, indicating a *weak negative* to *weak positive* relationship between school administrators' leadership style and teachers' job satisfaction. This implied that as school administrators' leadership style increases, there was no increase/decrease in the teachers' job satisfaction in these areas since all the p-values were larger than the level of significance of 0.05.

This implied that the relationship between school administrators' leadership styles and teachers' job satisfaction was complex and context-dependent. While some studies suggested that transformational leadership positively impacts job satisfaction in various aspects, other leadership styles may have mixed or negative effects. Further research was required to establish a more comprehensive understanding of this relationship and to identify specific strategies that school administrators can adopt to enhance job satisfaction among teachers.

Test of Significant Relationship between School Administrators' Role in the School Culture and Teachers' Job Satisfaction

The significant relationship between school administrators' role in the school culture and teachers' job satisfaction in terms of security, work environment, work-life balance and relationship with superiors and colleagues was treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

Table 14. Significant Relationship between School Administrators' Role in the School Culture and Teachers' Job Satisfaction

School Administrators' Role in the School Culture (IV)	Teachers' Job Satisfaction (DV)			
	Security	Work_E	Work-life	Relationship
Professional_C: Pearson Correlation	0.14	0.27	-0.04	0.19
Significance(2-Tailed)	.472	.162	.836	.335
N	30	30	30	30
Affiliative_C: Pearson Correlation	-0.01	0.01	0.02	0.67**
Significance(2-Tailed)	.951	.953	.907	<.001
N	30	30	30	30
Continuous_ILL: Pearson Correlation	0.29	0.18	-0.03	0.23
Significance(2-Tailed)	.133	.360	.880	.238
N	30	30	30	30

The correlation coefficients measured the strength and direction of the relationship between school administrators' role in the

school culture and teachers' job satisfaction in terms of security, work environment, work-life balance and relationship with



superiors and colleagues. A positive correlation indicates that as school administrators' role in the school culture increases, teachers' job satisfaction also tends to increase.

Correlations were computed among five school administrators' leadership style on data for 30 respondents. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

Only between school administrators' role in the school culture in terms of affiliative collegiality and teachers' job satisfaction in terms of relationship with superiors and colleagues was significant since the computed p-value of $<.001$ was less than the level of significance of 0.05 and the correlation coefficient was 0.67, indicating a *moderate positive* relationship. This implied that as school administrators' role in the school culture in terms of affiliative collegiality increases, there was a greater increase in the teachers' job satisfaction in terms of relationship with superiors and colleagues.

This implied the importance of school administrators' role in shaping school culture, particularly in fostering affiliative collegiality among staff members. The moderately positive significant relationship between administrators' promotion of affiliative collegiality and teachers' job satisfaction, specifically in terms of relationships with superiors and colleagues, underscores the importance of cultivating a positive work environment characterized by trust, collaboration, and mutual support. The role of school administrators extends beyond mere management tasks; they served as the architects of the school's culture, setting the tone for professional interactions and relationships among staff members. By prioritizing affiliative collegiality, administrators create a climate of inclusivity and cooperation, where individuals feel valued and respected for their contributions.

Furthermore, the correlation between administrators' promotion of affiliative collegiality and teachers' job satisfaction highlights the interconnectedness of organizational culture and employee well-being. When administrators prioritized fostering positive relationships and a supportive work environment, teachers were more likely to experience greater job satisfaction, leading to increased morale, productivity, and retention. Moreover, affiliative collegiality not only enhances job satisfaction but also contributed to improved student outcomes.

These findings suggested that a company's culture reflects how internal management, consumers, suppliers, and the environment were address. It underscores the importance of a strong, well-defined school culture in enhancing teacher job satisfaction and overall organizational effectiveness. By cultivating a culture that integrates effective practices and addresses internal and external challenges appropriately, schools can create a thriving educational environment that benefits all stakeholders. School culture determine as well the impression not only of the school but as well the well being of the teachers wherein it will be transferred to the learners the receiver thus it further give an opportunity for all to grow.

4. CONCLUSION AND RECOMMENDATIONS

The study findings provided valuable insights into the relationship between school administrators' leadership style and school culture with teachers' job satisfaction.

The findings of this study revealed that there was a weak negative to positive relationship between the school administrators' leadership style and teachers' job satisfaction and only between school administrators' role in the school culture in terms of affiliative collegiality and teachers' job satisfaction in terms of relationship with superiors and colleagues is significant

It was concluded that as school administrators' leadership style increases, there was no increase/decrease in the teachers' job satisfaction, this led to the acceptance of the null hypothesis. It implied that regardless of how administrators lead the school, whether it be through an authoritarian, democratic, transformational, or other leadership style, it did not have a measurable impact on teachers' job satisfaction. This suggested that other factors beyond leadership style may be more influential in determining teachers' job satisfaction within the school environment.

It was concluded that only one variable in school administrators' role in the school culture was observed that has significant effect on the teachers' job satisfaction, it showed that as in terms of affiliative collegiality increases, there was a greater increase in the teachers' job satisfaction in terms of relationship with superiors and colleagues. It's essential to consider the limitations of the study and the specific context in which the findings were obtained. Factors such as the size and demographics of the school, the leadership practices of administrators, and the measures used to assess affiliative collegiality and job satisfaction may impact the generalizability of the findings. The findings led to the acceptance of the null hypothesis.

Based on the drawn conclusions the following recommendations were made:

1. It is recommended that the school leaders may choose among the leadership styles which is appropriate to their context and may be beneficial among their teacher and learners for them to perform better.
2. School leaders may offer a capacity building or program that may enhance more the school culture being practice in their institution.
3. Teachers may prioritize the enhancement of the mentioned variables (security, work-life balance, work environment, relationship with superiors and colleagues) in terms of their job satisfaction for their own good. Likewise, they may propose a program to help them better.

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EMPOWERING THE DIGITAL GENERATION: EXPLORING THE IMPLEMENTATION OF EDUCATION 4.0 FOR ENHANCED STUDENT LEARNING AND INVOLVEMENT IN INFORMATION AND COMMUNICATION TECHNOLOGY

Elaiza Zorilla Garcia

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study focused on determining the level of education 4.0 implementation and its relationship to the students' learning and involvement in Information Communication Technology. It specifically determined the level of implementation of Education 4.0, the level of students' learning and involvement in Information and Communication Technology, and the significant relationship between implementing Education 4.0 on student learning and student involvement in Information and Communication Technology.

It utilized the descriptive-correlational research design to identify the relationship between variables. It involved 120 respondents representing the students taking Information and Communication Technology at the Lumban-Kalayaan Sub-Office. A self-made questionnaire validated by the expert was used.

The following were the study's findings: The students successfully implemented Education 4.0 in their subject in Information and Communication Technology; there was a high extent of student learning and involvement in Information and Communication Technology. It was evident from the results that Education 4.0 had a significant relationship to students' learning in ICT, particularly communication, while cloud-based activities showed a significant relationship to all students' learning in ICT. Moreover, adaptive assessment showed a significant relationship with the students' involvement in ICT, particularly instructor-student interaction and personalized learning path; while inclusivity and ethical awareness showed a significant relationship with peer collaboration.

The implementation of Education 4.0 was observed to have a relationship in shaping students' communication skills and idea organization. Nevertheless, only the cloud-based activities showed a relationship in students' development of competencies in computer technicality, cyberspace navigation, idea organization, and information analysis. This signified an acceptance of the null hypothesis. Moreover, ethical awareness and inclusivity showed a significant relationship with students' involvement in peer collaboration, signifying acceptance of the null hypothesis. The adaptive assessment did not significantly affect students' involvement in ICT, which was based on consideration of students' availability affecting the frequency of usage and interaction.

From the conclusion, it is recommended that teachers strengthen the implementation of Education 4.0 in lesson delivery to address students' needs and learning styles through technology utilization. Teachers may provide a cloud-based and adaptive assessment strategy to implement Education 4.0 while evaluating students' competencies to increase mastery. The school may use paperless instruction through implementing Education 4.0 in the teaching-learning process to address student difficulty through constant feedback that may lead to mastery of competencies. Future researchers are advised to study the students' initiative to use ICT resources for independent learning and competency practice.

KEYWORDS: Digital Generation; students' learning; involvement

1. INTRODUCTION

The fourth industrial revolution and paradigm shift in education create innovation in teaching and learning strategies in every school to open limitless learning opportunities for learners to enjoy competencies aligned to the needs of the industry. Although students are well informed on the different functions of their gadgets, there are still threats when it comes to their attention and purpose of utilizing gadgets. Although it is considered functional in learning, particularly during the pandemic, it is observable that the increasing number of hours spent on gadgets was focused on pure entertainment rather than learning.

Education 4.0 is not only focused on using different office presentations during the discussion. It also includes teachers' creativity in incorporating the application to design instruction that facilitates the attainment of learning objectives through active learning, mitigating the use of different websites and applications among learners, making the learning process easier

but efficient. A wide understanding of different office presentations, websites, online applications, video editing, and many other related concepts facilitates the interactive implementation of learning experiences throughout the country.

With fast-growing technological growth, students affected can utilize tools and navigate the virtual world through access to various websites. As a result, they tend to be proficient in using ICT using different gadgets to deal with different tasks assigned.

Information communication technology has significantly impacted the development of young individuals during the 21st-century era. This influences how people deal with their everyday lives worldwide, which tends to depend on the fast-growing product of technology. Cell phones, laptops, and the internet are the basis of ideas and how things are done.

Drastic changes brought technology development opens opportunities for people to enjoy the features of information



communication technology integration in everyday activities in entertainment, communication, business, and education. It allows people to enjoy the features of the internet and computer in many activities, helping them continuously perform their duties and responsibilities flexibly. This allows the industry to maximize productivity and develop skills, knowledge, and innovative potential among workers. Information Communication technology in education during the paradigm shift allows teachers and students to rely on online learning and computer features to ensure the efficiency of the delivery of curriculum during distance learning. The teaching-learning process changes from traditional instruction to technology-aided learning. This brought great challenges to education sectors and teachers, who had to upskill and practice methodologies using computers and the internet during instruction.

With the existence of this education 4.0, primary, secondary, and tertiary levels of education are adjusting to implementing the trends in the teaching and learning process to attain sustainable learning and produce lifelong learners.

With this, the researcher develops the study to determine the level of Empowering the Digital Generation: Exploring the Implementation of Education 4.0 for Enhanced Student Learning and Involvement in Information and Communication Technology.

1.1 Statement of the Problem

Specifically, it sought to answer the following question.

1. What is the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of:
 - 1.1 Adaptive assessment
 - 1.2 Cloud-based activities
 - 1.3 Customized Learning
 - 1.4 Ethical Awareness, and
 - 1.5 Inclusivity?
2. What is the level of student learning in terms of:
 - 2.1 Communication
 - 2.2 Computer technicality
 - 2.3 Cyber Space Navigation
 - 2.4 Information Analysis, and
 - 2.5 Idea organization?
3. What is the level of student involvement in ICT in terms of:
 - 3.1 Instructor-student interaction
 - 3.2 Peer collaboration and
 - 3.3 Personalized learning path?
4. Does the Implementation of Education 4.0 significantly correlate to student learning in ICT?

5. Does the Implementation of Education 4.0 significantly correlate to student involvement in ICT?

2. METHODOLOGY

This study uses descriptive correlation research design to describe the effect of phenomenon in technological development in education set up and the effects of practices in the student learning and competencies. According to Aggarwal and Ranganathan (2019). Descriptive studies were cost-effective, efficient, and useful for resource planning, community evaluation, and disease-cause determination. They could identify regional and temporal variations in disease prevalence and develop complex designs. However, they can face ethical criticism if confidential information is sought. Despite this, they provide crucial insights into social problems and decision-making.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results yielded from the treatment of the data gathered in this study. The following tabular presentations and discussions characterize the implementation of Education 4.0 and students' ICT learning and involvement.

Level of Implementation of Education 4.0 in Teaching Information and Communication Technology

This study tried to determine the level of implementation of education 4.0 in teaching learning process in information communication technology subjects. This included adaptive assessment, cloud-based activities, customized learning, ethical awareness, and inclusivity. This variable clarified the different strategies used in the teaching-learning process which facilitated the student's mastery of the competencies in 21st century education with technology.

The level of implementation of Education 4.0 was revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Adaptive Assessment

Table 1 presents the level of implementation of education 4.0 in teaching information and communication technology in terms of adaptive learning. This table emphasizes the teaching methods that focus on students' availability and preferences. The table includes the statements, mean, standard deviation and remarks.

Table 1 Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Adaptive Assessment

STATEMENTS	MEAN	SD	REMARKS
1. As a student of information communication technology, I was exposed to performance tasks independently to show mastery.	3.38	0.60	Strongly Agree
2. As a student of Information Communication Technology, I experienced access written activities in google classroom to	3.31	0.60	



<i>accomplished based on my availability.</i>			Strongly Agree
<i>3. As a student of Information Communication Technology, I experienced address problems in the community through performance task assigned by the teacher.</i>	3.26	0.69	Strongly Agree
<i>4. As a student of Information Communication Technology, I experienced utilized applications like quizzes for drills of leaned concepts in the lesson.</i>	3.37	0.61	Strongly Agree
<i>5. As a student of Information Communication Technology, I experienced Used e-portfolio for submission for of complied written works that show competency in computer use.</i>	3.40	0.66	Strongly Agree
Weighted Mean	3.35		
SD	0.44		
Verbal Interpretation	Very Great Extent		

Table 1 illustrates the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of Adaptive assessment. It showed that the students obtained a very great extent ($M=3.35$, $SD=0.44$) in level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of adaptive assessment. This denoted that the learners had the experience of practicing varied assessment methods regarding their competencies in information and communication technologies in an innovative and technology-based manner.

Students of information communication technology under the technology in livelihood education subject strongly agreed ($M=3.40$, $SD=0.66$) on their experiences on education 4.0 with the use of e-portfolio for sto submitted written works that shows show This denotes that the learner uses a portfolio to monitor their progress through series of activities at their convenience level.

Learning through e-portfolios like Google Classroom improves

ICT and English language proficiency. Despite potential obstacles, proper planning, organization, and training can overcome them. Universities should consider student opinions for increased involvement. Instructors are incorporating technology into teaching-learning activities, and strategies for fostering learning using e-portfolios are essential, Muin et al. (2021).

On the other hand, although it is the least among the indicators, the students strongly agreed with ($M=3.26$, $SD=0.69$) on their experiences with Information communication technology as they address community problems through the teacher's performance task. This entailed that learners perceived problems in the community through the teacher's assessment method and address them by providing solutions as the application of their learned competencies. With varied exposure and observation processes needed to accomplish activities, the student's perceived problem within the community and reflect on possible alternatives based on learned concepts and competencies in the school.

Table 2 Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Cloud-Based Activities

STATEMENTS	MEAN	SD	REMARKS
<i>1. As a student of information communication technology, I have experience saving works in Google Drive for storage.</i>	3.37	0.72	Strongly Agree
<i>2. As a student of Information Communication Technology, I experienced allowing paperless submission through e-portfolios of complied activities.</i>	3.21	0.67	Strongly Agree
<i>3. As a student of Information Communication Technology, I experienced uploading e-portfolio in a teacher's Google classroom.</i>	3.13	0.75	Strongly Agree
<i>4. As a student of Information Communication Technology, I experienced practice paperless learning practice through cloud storage.</i>	3.21	0.73	Strongly Agree
<i>5. As a student of information communication technology, I have experience managing my own activities in cloud storage.</i>	3.31	0.73	Strongly Agree
Weighted Mean	3.25		
SD	0.52		
Verbal Interpretation	Very Great Extent		



Table 2 presents the level of implementation of education 4.0 in teaching information and communication technology in terms of cloud based activities. This table emphasizes the teaching methods utilized google drive and cloud storage on the internet in compiling students' outputs. The table included the statements, mean, standard deviation and remarks.

Table 2 shows the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of cloud-based activities. Evidently, the students obtained a great extent (M=3.25, SD=0.52) in Implementation of Education 4.0 in teaching Information and Communication Technology in terms of cloud-based activities. This denotes that the learners had the experiences on file management in cloud storage as they upload different learning task and perform different activities which serves as the evidence of their mastery and competency.

Students of information communication technology under the technology in livelihood education subject strongly agree (M=3.40, SD=0.66) on their experiences on education 4.0 as they save works in google drive for storage. This denotes that the learners practically used google drive as cloud storage to save activities and provide mode of verification for competency development in information communication technology utilization and practice.

More so, the students in information communication technology are strongly agree (M=3.13, SD=0.75) on their experiences to upload e portfolio in teacher's google classroom. This denotes that although it obtained least among the indicators, students had the experience to submit their work in the google classroom provided by the teachers to organize self-learning and received timely feedback about their performance.

Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Customized Learning

Table 3 presents the level of implementation of education 4.0 in teaching information and communication technology in terms of customized learning. This table emphasizes the teaching methods that consider the students' availability and ability. The table included the statements, mean, standard deviation and remarks.

Table 3 shows the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of Customized Learning. Evidently, the students obtained a great extent (M=3.39, SD=0.43) in the Implementation of Education 4.0 in teaching Information and Communication Technology in terms of customized learning. This denotes that the learners had experiences performing activities based on students' availability, ability weaknesses and strengths.

Table 3 Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Customized Learning

STATEMENTS	MEAN	SD	REMARKS
<i>As a student of Information Communication Technology, I experienced performing activities online based on time availability.</i>	3.36	0.66	Strongly Agree
<i>As a student of Information Communication Technology, I experienced search for additional resources that support learning.</i>	3.45	0.63	Strongly Agree
<i>As a student of Information Communication Technology, I aligned the learning experiences on computer technicalities and practice in own learning style.</i>	3.29	0.64	Strongly Agree
<i>As a student of Information Communication Technology, I experienced determine strength in usage of different websites on the internet.</i>	3.36	0.60	Strongly Agree
<i>As a student of Information Communication Technology, I experienced enhance own weaknesses in using computers through the personal experiences of challenges.</i>	3.46	0.61	Strongly Agree
Weighted Mean	3.39		
SD	0.43		
Verbal Interpretation	Very Great Extent		

Table 3 shows the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of Customized learning. Evidently, the students obtained a great extent (M=3.39, SD=0.43) through the personal experiences of challenges. This denotes that the activities provided by the teachers using computers helped the learners to address their difficulty in different competencies and aid them in improving on their least learned topics.

More so, it is evident on the table that learners with information communication technology subjects strongly agree (M=3.29, SD=0.64) on their experience with the implementation of education 4.0 as they had the chance to align the learning experiences on computer technicalities and practice in their own learning style. This indicated that learners in information communication technology subject had the opportunity to integrate their personal experiences with computer utilization into their learning style to process holistic learning and mastery of the competency.



Table 4 Level of Implementation of Education 4.0 in teaching Information and Communication Technology in Terms of Ethical Awareness

STATEMENTS	MEAN	SD	REMARKS
1. As a student of information communication technology, I have experienced identifying the significance of the rules and regulations in using the internet.	3.54	0.59	Strongly Agree
2. As a student of Information Communication Technology, I reflected on the pros and cons that affect the ICT integration practices.	3.36	0.64	Strongly Agree
3. As a student of information communication technology, I experienced filter information presented online that affects the effective use of ICT resources in learning.	3.34	0.63	Strongly Agree
4. As a student of Information Communication Technology, I experienced hands-on activities in using internet that reflect the etiquette in computer use.	3.36	0.64	Strongly Agree
5. As a student of Information Communication Technology, I experienced identifying penalties for violation of rules and regulation concerns in misconduct on computer use.	3.40	0.64	Strongly Agree
Weighted Mean	3.50		
SD	0.46		
Verbal Interpretation	Very Great Extent		

Table 4 presents the level of implementation of education 4.0 in teaching information and communication technology in terms of ethical awareness. This table emphasized the teaching methods in teaching ICT that focused on the ethical practices in utilizing internet and the web. The table includes the statements, mean, standard deviation and remarks.

Table 4 shows the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of ethical awareness. Evidently, the students obtained a great extent ($M=3.50$, $SD=0.46$) in the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of ethical awareness. This proves that the learners highly learned the different etiquettes in using different platforms using the internet as they understand the pros and cons of their behavior while using technology devices.

The table shows that the students strongly agree ($M=3.54$, $SD=0.59$) as they experienced the significance of the rules and regulations in using the internet. This probe that the learners develop their understanding of the laws that cover their practice in using internet and computers which affects their corrective actions in using the media.

Also, the learners strongly agreed ($M=3.34$, $SD=0.63$) on their experiences to filter information present online that affects

the effective use of ICT resources in learning. This entailed that the learners developed competency to validate the information on the internet in terms of reliability, usefulness and correctness based on the sources.

Table 5 presents the level of implementation of Education 4.0 in teaching information and communication technology in terms of inclusivity. This table emphasizes the teaching methods in ICT that focus on the students regardless of race, ability, and location. The table included the statements, mean, standard deviation and remarks.

Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Inclusivity

Table 5 shows the level of Implementation of Education 4.0 in teaching Information and Communication Technology in terms of inclusivity. It is evident that the students obtained a great extent ($M=3.41$, $SD=0.43$) in the Implementation of Education 4.0 in teaching Information and Communication Technology in terms of inclusivity. This proves that the learners highly experienced the inclusive education in terms of language, geographical location and students' strengths and weaknesses through education 4.0 implementation in information and communication technology subjects.



Table 5 Level of Implementation of Education 4.0 in Teaching Information and Communication Technology in Terms of Inclusivity

STATEMENTS	MEAN	SD	REMARKS
<i>As a student of Information Communication Technology, I experienced integrated community practice as example of a discussion of skills development in computer use.</i>	3.39	0.66	Strongly Agree
<i>As a student of Information Communication Technology, I experienced the use of video conferencing to address group activities concerning the distance of each member.</i>	3.35	0.60	Strongly Agree
<i>As a student of Information Communication Technology, I experienced the use of both English and Filipino during discussions to address students' difficulty in understanding computer technicalities.</i>	3.46	0.58	Strongly Agree
<i>As a student of information communication technology, I experienced a boost in my talents and expertise in computer technicalities.</i>	3.31	0.72	Strongly Agree
<i>As a student of Information Communication Technology, I experienced support from classmates to address my weaknesses in different activities concerned with computer utilization.</i>	3.48	0.63	Strongly Agree
Weighted Mean	3.41		
SD	0.43		
Verbal Interpretation	Very Great Extent		

Learners strongly agreed ($M=3.41$, $SD=0.43$) that they had experienced support from their classmates to address their weaknesses in different activities concerned with computer utilization. This emphasized that the learners experienced collaborating ideas with their peers as the teachers imposed the education 4.0 in information communication technology, where the in students had the opportunity to address the student weaknesses in computer utilization activity.

Also, it is evident from the table that the learners strongly agreed ($M=3.31$, $SD=0.72$) that their experience boost talents and expertise in computer technicalities. This denoted that the learners enhance their computer ability as there is consideration of their expertise and interest in computer utilization.

Level of Student Learning in ICT

This study determined the students' learning level, including communication, computer technicality, cyberspace navigation, information analysis and idea organization. The level of student learning is revealed in the following table, which shows the statement, mean, standard deviation, and verbal interpretation.

Table 6 presents the level of student learning in terms of articulate ideas, share experiences, respond to the message and ethical practices in communication regardless of the medium used. The table includes the statements, mean, standard deviation and remarks.

Table 6 Level of Student learning in Terms of Communication

STATEMENTS	MEAN	SD	REMARKS
<i>1. I see myself sharing ideas in the discussion online and face to face.</i>	3.54	0.63	Strongly Agree
<i>2. I see myself that I listen effectively to understand the content of idea.</i>	3.49	0.62	Strongly Agree
<i>3. I see myself that I respond to a message to express specific purpose.</i>	3.47	0.59	Strongly Agree
<i>4. I see myself that I utilize media to give feedback from the information.</i>	3.40	0.59	Strongly Agree
<i>5. I see myself that I practice ethics of receiving and sending message online.</i>	3.45	0.70	Strongly Agree
Weighted Mean	3.48		
SD	0.44		
Verbal Interpretation	Very Great Extent		

Table 6 shows the level of student learning in terms of communication. It is evident that the students obtained a great extent ($M=3.48$, $SD=0.44$) in terms of communication in student learning. This entailed that learners enhance their

communication ability in the implementation of education 4.0 in information communication technology as there are opportunities to express ideas and receive responses through the use of different communication applications in the teaching-



learning process.

The table provided evident data that learners strongly agreed ($M=3.48, SD=0.44$) that they could share ideas in the discussion through online and face-to-face platforms. This emphasized that the learners are confident in their ability to communicate their ideas in online classes and discussions as well as in a face-to-face setting. They develop the ability to communicate their thoughts effectively and share them with peers.

Moreover, the student was also strongly agreed ($M=3.40, SD=0.59$) that she had the ability to utilize media to give feedback from the information. This proved that the learners are confident in their ability to respond to different information in

different media by providing feedback and their own perception through reflection.

It suggests that these activities are an effective strategy for enhancing communication skills, as they progress progressively and linearly, indicating a significant improvement in students' English communication abilities.

Table 7 presents the level of student learning in terms of computer technicality. This table provided data about the students' ability to access the different parts of the computer with care, utilize different software and determine the problems upon using which allowed them to create alternative actions. The table presents the statements, mean, standard deviation and remarks.

Table 7 Level of Student Learning in Terms of Computer Technicality

STATEMENTS	MEAN	SD	REMARKS
1. I see myself that I process information through the use of different office presentation.	3.44	0.67	Strongly Agree
2. I see myself that I identify malfunction in computers while using.	3.29	0.64	Strongly Agree
3.I see myself that I utilize offline applications depending on purpose.	3.36	0.62	Strongly Agree
4. I see myself that I manage hardware and software related to computer.	3.31	0.70	Strongly Agree
5.I see myself that I use computer responsively and carefully to maintain durability.	3.45	0.63	Strongly Agree
Weighted Mean		3.37	
SD		0.48	
Verbal Interpretation		Very Great Extent	

Table 7 shows the level of student learning in terms of computer technicality. It is evident that the students obtained a very great extent ($M=3.37, SD=0.48$) in level of student learning in terms of computer technicality. This entailed that learners enhanced their knowledge technicality of computers and gadgets in the implementation of education 4.0 in information communication technology as there are opportunities to utilize different applications. They could utilize different hardware and software for the computers as they can identify the problems while responsibly utilizing computers for their assigned function.

The table shows that learners taking Information communication technology as their subject strongly agreed ($M=3.45, SD=0.63$) that they can use computers responsively and carefully to maintain durability. This denotes that the students are confident in their competencies learned in teaching in the learning process, that they can use the computer according to its function and responsible for maintaining its durability as they are aware of the different considerations in maximizing its functionality.

Further, the learners strongly agreed ($M=3.29, SD=0.62$) that they can identify malfunction in computers while using them.

It denoted that the learners are confident that they learned competencies in trouble shooting defects of the parameters, and conditional statements, and understand its practical computer hardware and software upon observing it operation during utilization. The learners were able to identify the defect and provide solution to address the technical difficulty in utilizing ICT resources.

Level of Student Learning in Terms of Cyber Space Navigation

Table 8 presents the level of student learning in terms of cyber space navigation. This table provided details on the students' development and learning regarding the utilization of different applications on the internet based on their function and goals aligned with ethical standards. The table presents the statements, mean, standard deviation and remarks.

Table 8 shows the level of student learning in terms of Cyber space navigation. It is evident that the students obtained a great extent ($M=3.42, SD=0.46$) in level of learning regarding cyber space navigation. This entailed that learners enhance their knowledge on proper use of websites and cyber space depending on its function with consideration to their personal to specific function.



Table 8 Level of Student Learning in Terms of Cyber Space Navigation

STATEMENTS	MEAN	SD	REMARKS
1. I see myself that I access different educational website to gain additional resources.	3.45	0.66	Strongly Agree
2. I see myself that I practice ethical standards while using internet resources.	3.41	0.68	Strongly Agree
3. I see myself that I process uploading and downloading of information through internet.	3.38	0.61	Strongly Agree
4. I see myself that I access different website depending on the purpose of activities.	3.41	0.60	Strongly Agree
5. I see myself that I protect private information by creating firewall for malwares.	3.40	0.69	Strongly Agree
Weighted Mean	3.42		
SD	0.46		
Verbal Interpretation	Very Great Extent		

It is evident on the result that learners strongly agreed ($M=3.45$, $SD=0.66$) that they can access different educational websites to gain additional resources. This entailed that learners develop the ability to access different websites available on the internet to support their learning and provide supplemental resources for in-depth understanding of the lesson leading to mastery of the competency.

Although landed as the least, the learners who took information communication technology strongly agree ($M=3.38$, $SD=0.61$) that they can process uploading and downloading information through internet. This internet was downloaded into their devices and the capacity to share data from their gadget to the cyberspace through uploading.

Level of Student Learning in Terms of Information Analysis

Table 9 presents the level of student learning in terms of information analysis. This table provided details on the student’s learning on evaluating the validity and reliability of information based on its web sources. The table reflects the statements, mean, standard deviation and remarks.

It indicates the level of student learning in terms of information $SD=0.48$) in level learning in terms of information analysis. This entailed that learners understand the process of obtaining information on the internet and checking its validity, reliability and functionality by comparing the facts and opinion.

Table 9 Level of Student Learning in Terms of Information Analysis

STATEMENTS	MEAN	SD	REMARKS
1. I see myself accessing information from different reliable educational websites.	3.43	0.67	Strongly Agree
2. I see myself that I evaluate the validity of information through proper referencing from reliable websites.	3.37	0.63	Strongly Agree
3. I see myself that I identify the application of information obtained from the internet to personal learning.	3.40	0.63	Strongly Agree
4. I see myself creating a concrete idea from the information on different websites.	3.36	0.66	Strongly Agree
5. I see myself that I distinguish facts from opinion of the information present in the internet.	3.38	0.69	Strongly Agree
Weighted Mean	3.39		
SD	0.48		
Verbal Interpretation	Very Great Extent		

It is evident from the survey result that learners strongly agreed ($M=3.43$, $SD=0.67$) that they can access information from different reliable educational websites. This showed that the learners are aware of the process of validating the reliability of different websites on the internet by processing information and checking the correctness through comparison with other websites.

Although landed least among the indicators, the learners

strongly agree ($M=3.36$, $SD=0.66$) that they can evaluate the validity of information through proper referencing from reliable websites. This indicated that the learners perform fact checking of information based on the sources of information which should be aligned on the perceived functionality of both the website and information.

Level of Student Learning in Terms of Idea Organization

Table 10 illustrates the level of student learning in terms of idea



organization. This table shows data that supports the student’s learning in terms of information arrangement leading to holistic idea and concrete basis for learning. It includes the statements, mean, standard deviation and remarks.

Table 10 indicates the level of student learning in terms of idea organization. It is evident that the students obtained

very great extent ($M=3.39$, $SD=0.48$) in level of student learning in terms of information analysis. This entailed that learners learned to arrange information based on their own cognitive process making one concrete idea. This shows that learners were also able to synthesize information and interpret ideas for easy understanding.

Table 10 Level of Student Learning in Terms of Idea Organization

STATEMENTS	MEAN	SD	REMARKS
1. I see myself that I identify the relationship of ideas obtained from the websites.	3.48	0.58	Strongly Agree
2. I see myself arranging information obtained on the internet from simplest to complex.	3.41	0.57	Strongly Agree
3. I see myself that I categorize data obtained in the websites according to its importance.	3.42	0.66	Strongly Agree
4. I see myself that I create a concept of ideas from the internet for easy understanding.	3.46	0.61	Strongly Agree
5. I see myself comparing the differences of ideas on different educational websites.	3.40	0.64	Strongly Agree
Weighted Mean	3.44		
SD	0.42		
Verbal Interpretation	Very Great Extent		

The table shows that learners strongly agreed ($M=3.48$, $SD=0.58$) that they can identify the relationship of ideas obtained from the websites. This proved that the learners were able to arrange ideas depending on the perceived relationship upon analysis that contributes to one whole idea.

More so, the learners also strongly agreed ($M=3.41$, $SD=0.57$) that arrange information obtained in the internet from simplest to complex. This denoted that the learners could weight the simplest information to complex based on their level of understanding.

Level of Student Involvement in ICT

This study identified the level of students’ involvement, including instructor-student interaction, peer collaboration and personalized learning path.

The level of students involvement in information communication technology is revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Level of Student Involvement in terms of Instructor-Student Interaction

Table 11 presents the level of student’s involvement in terms of instructor-student interaction. It is evident that the students obtained very great extent ($M=3.37$, $SD=0.45$) in level of involvement in ICT in terms of student-teacher interaction. This entailed that learners had the chance to exchange idea with the teacher concerning the discussion and clarified topics which may lead to practice of competency though the use of information communication technology resources.

Table 11 Level of Students’ Involvement in Terms of Instructor-Student Interaction

STATEMENTS	MEAN	SD	REMARKS
1. As a student of Information Communication Technology, I experienced exchange idea regarding the experience in the use of technology with teacher during discussion.	3.43	0.59	Strongly Agree
2. As a student of Information Communication Technology, I experienced ask question regarding my difficulties in using technology task after the discussion.	3.42	0.62	Strongly Agree
3. As a student of Information Communication Technology, I experienced share paperless activities with my teachers through internet.	3.29	0.64	Strongly Agree
4. As a student of Information Communication Technology, I received feed-back on performance tasks from teachers using google classroom.	3.36	0.67	Strongly Agree
5. As a student of Information Communication Technology, I experienced conducting instant meetings with teacher for consultation using	3.31	0.71	Strongly Agree



<i>google meet.</i>			
Weighted Mean		3.37	
SD		0.45	
Verbal Interpretation		Very Great Extent	

It is evident that students strongly agreed ($M=3.43, SD=0.59$) on their experience exchanging ideas regarding the experience in the use of technology with teacher during discussion. This

indicated that the learners use information communication technology resources to communicate with the teacher to discuss the topic.

Table 12 Level of Student Involvement in ICT in Terms of Peer Collaboration

STATEMENTS	MEAN	SD	REMARKS
1. As a student of Information Communication Technology, I experienced plan progress of group activities with peer using Google Calendar.	3.37	0.70	Strongly Agree
2. As a student of information communication technology, I have experience conducting instant meetings with classmates through Google Meet.	3.25	0.73	Strongly Agree
3. As a student of information communication technology, I have experience collaborating on ideas in one activity on time, regardless of geographical location, through Google Docs.	3.35	0.67	Strongly Agree
4. As an Information Communication Technology student, I experienced sharing academic references with classmates through Mendeley's software.	3.24	0.68	Strongly Agree
5. As a student of Information Communication Technology, I experienced aid in accomplishing computer-related tasks from peers through constant reminders in the group chat.	3.30	0.64	Strongly Agree
Weighted Mean		3.30	
SD		0.50	
Verbal Interpretation		Very Great Extent	

Moreover, although landed as least among the indicators, learners still strongly agreed ($M=3.43, SD=0.59$) on their experience of sharing paperless activities with my teachers through internet. Meaning, that the learners enjoyed the paperless activity submission as they utilized information communication technology resources by using cloud storage and classroom in monitoring own progress in the subject.

Table 12 indicates the level of student involvement in ICT terms of peer collaboration. It is evident that the students obtained a great extent ($M=3.30, SD=0.50$) in level of student involvement in ICT in terms of peer collaboration. This ensures that learners have the chance to exchange ideas with classmates in accomplishing their academic responsibilities with the aid of information communication technology resources that offer constant feedback among participants.

The data indicated that the learners strongly agreed ($M=3.37, SD=0.70$) they had experience in planning the progress of group activities with peers using google calendar. This denotes that the google calendar shared with the group member provides constant reminders to their academic responsibility. Also, the google calendar allows the learners to share meeting reminders

and link.

Also, the respondent strongly agreed ($M=3.24, SD= 0.68$), on their experience to share academic references with classmates through Mendeley's software. This denotes that the learners practice sharing of references that serves as additional learning resources and practice proper citation upon using published material online in their studies. This also signified that learners use other references assigned from the textbook content to address their clarification and attain mastery of the topic.

Level of student involvement in ICT in terms of Personalized learning path

Table 13 indicates the level of student involvement in ICT terms of personalized learning path. The students obtained a great extent ($M=3.37, SD=0.47$) in the level of student involvement in ICT in terms of the personalized learning path. This entails that learners had the experience of managing their own learning based on their preferences and schedules through different websites to support their study habits.



Table 13 Level of Student Involvement in ICT in terms of Personalized Learning Path

STATEMENTS	MEAN	SD	REMARKS
As a student of Information Communication Technology, I experienced a set of performances in utilization of computers in google classroom aligned to learning style.	3.35	0.62	Strongly Agree
As a student of Information Communication Technology, I experienced search additional resources to support learning in computer technicalities.	3.33	0.66	Strongly Agree
As a student of Information Communication Technology, I experienced accessing website that supplies additional support that addresses my question regarding thwebsite's technical problemste.	3.36	0.65	Strongly Agree
As a student of Information Communication Technology, I experienced manage own learning schedule in computer usage by arranging schedules in google classroom.	3.31	0.69	Strongly Agree
As a student of Information Communication Technology, I experienced practice skills in website making aided by the internet.	3.46	0.59	Strongly Agree
Weighted Mean	3.37		
SD	0.47		
Verbal Interpretation	Very Great Extent		

It is evident that the learners strongly agreed ($M=3.46$, $SD=0.59$) that they experience practicing their skills in website making aided by the internet. This proved that the learners had the chance to use the information and communication technology in the internet either written or video tutorial in creating websites through the help of the internet.

Evidently, learners strongly agreed ($M=3.31$, $SD=0.69$) that they experienced managing their own learning schedules in computer usage by arranging schedules in Google Classroom. This denotes that through the use of computers the students develop their competency through independent learning practices aided by the computer. The students had the chance to perform the task based on their preferred schedule and difficulty level using application and communication software.

This research also determined the significant relation between independent variable and dependent variable particularly the level of implementation of education 4.0 and student learning in Information and Communication Technology.

Significant Relationship Between the Implementation of Education 4.0 and Student Learning in Information and Communication Technology

The significant relationship between variables is revealed in the following table, which shows the independent variable, dependent variable, p-value and data analysis.

Table 14 presents the significant relationship between the Implementation of Education 4.0 and student learning in ICT. Based on the computed r-values from the test, it was observed that implementation of education 4.0 in terms of adaptive assessment showed significant relationship to students' learning in ICT particularly in communication and idea organization as it obtained p-value less than the alpha level of 0.05. Moreso, it can be gleaned from the table that implementation of education 4.0 in terms of cloud-based activities showed significant relationship to all student's learning in ICT. Moreover, implementing education 4.0 in terms of customized learning, ethical awareness and inclusivity only showed significant relationship to student communication skills in learning information communication technology as obtained p-value lower than alpha level.

Table 14 Significant relationship between the Implementation of Education 4.0 and student learning in Information and Communication Technology

		Students Learning in Information and Technology Communication				
		Communic ation	Computer technicality	Cyber Space Navig ation	Informati on Analysis	Idea organization
Implementation of Education 4.0						
Adaptive assessment	Pearson Correlation	0.49	0.438	0.35	0.364	0.468
	Sig. (2-tailed)	0.002	0.577	0.145	0.343	0.026
	N	120	120	120	120	120
	Analysis	Significant	Significant	Signifi cant	Significan t	Significant
Cloud based	Pearson	0.433	0.349	0.36	0.387	0.412



activities	Correlation					
	Sig. (2-tailed)	0.000	0.022	0.002	0.006	0.000
	N	120	120	120	120	120
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Signifi- cant</i>	<i>Significan- t</i>	<i>Significant</i>
Customized Learning	Pearson Correlation	0.556	0.484	0.52	0.577	0.635
	Sig. (2-tailed)	0.022	0.696	0.503	0.931	0.135
	N	120	120	120	120	120
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Signifi- cant</i>	<i>Significan- t</i>	<i>Significant</i>
Ethical Awareness	Pearson Correlation	0.678	0.628	0.608	0.67	0.736
	Sig. (2-tailed)	0.027	0.42	0.718	0.774	0.213
	N	120	120	120	120	120
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Signifi- cant</i>	<i>Significan- t</i>	<i>Significant</i>
Inclusivity	Pearson Correlation	0.598	0.563	0.536	0.629	0.655
	Sig. (2-tailed)	0.042	0.448	0.735	0.782	0.262
	N	120	120	120	120	120
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Signifi- cant</i>	<i>Significan- t</i>	<i>Significant</i>

This denoted that Education 4.0 has enhanced students' communication skills by enabling them to practice oral and written communication principles. This approach supports learning and mastery of competency in information and communication technology. Students have developed the ability to select, criticize, and organize concrete understanding through activities submitted via Google Drive and assessment methods conducted through applications and websites. They have also enhanced their critical thinking abilities by organizing ideas based on their cognitive development level and learning style.

Significant Relationship Between the Implementation of Education 4.0 and Student Involvement in ICT

Table 15 presents the significant relationship between the Implementation of Education 4.0 and student involvement in Information and Communication Technology.

It is evident from the results that implementation of education 4.0 that adaptive assessment showed and customized learning no significant relationship to students' involvement in ICT as obtained p-value higher than the alpha level of 0.05. Students' engagements were influenced by the frequency of use, and teachers do not always integrate the adaptive assessment and customized learning. Students' needs for implementation are considered.

Moreover, implementation of education 4.0 in terms of cloud-based activities showed relationship to both instructor-student interaction and personalized learning in which the integration of google drive in submission of student activities aid the students to independently access the academic requirements based on availability and ask teacher to clarify instructions when needed.

Table 15 Significant Relationship Between the Implementation of Education 4.0 and Student Involvement in ICT

		Students Involvement in Information and Communication Technology		
Implementation of Education 4.0		Instructor-student interaction	Peer collaboration	Personalized learning path
Adaptive assessment	Pearson Correlation	0.334	0.459	0.533
	Sig. (2-tailed)	0.697	0.335	0.648
	N	120	120	120
	Strength	<i>Not</i>	<i>Not</i>	<i>Not</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Cloud based activities	Pearson Correlation	0.355	0.487	0.477
	Sig. (2-tailed)	0.026	0.261	0.015



	N	120	120	120
	Analysis	<i>Significant</i>	<i>Not Significant</i>	<i>Significant</i>
Customized Learning	Pearson Correlation	0.454	0.486	0.495
	Sig. (2-tailed)	0.581	0.052	0.573
	N	120	120	120
	Strength	<i>Not</i>	<i>Not</i>	<i>Not</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Ethical Awareness	Pearson Correlation	0.501	0.457	0.602
	Sig. (2-tailed)	0.378	0.033	0.332
	N	120	120	120
	Strength	<i>Not</i>	<i>Not</i>	<i>Not</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Inclusivity	Pearson Correlation	0.558	0.508	0.6
	Sig. (2-tailed)	0.339	0.023	0.323
	N	120	120	120
	Strength	<i>Not</i>	<i>Not</i>	<i>Not</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>

Furthermore, the implementation of education 4.0 in terms of ethical awareness and inclusivity showed a significant relationship to only in peer collaboration of student engagement in information communication technology. This implies that the students' ethical awareness of utilizing information communication technology resources enables them to become responsible digital citizens, allowing them to communicate effectively with peers and practice assistance in academic responsibilities. Also, inclusive education through online learning and flexible platform of curriculum delivery aids the students' exchange of ideas and sharing expertise among classmates as they assist co-students in competencies which they encounter difficulty.

Learning through ICT in the classroom is a highly effective method for teachers and students. However, educators must possess the necessary knowledge and skills to utilize ICT in their teaching methods effectively. A "trial and error" stage is necessary before teachers feel comfortable using it. Recommendations include digital literacy assessments, hands-on activities, seminars, and pieces of training, and student action research to identify and resolve issues with ICT use and challenges in teaching and learning (Tayaban, 2022).

4. CONCLUSION AND RECOMMENDATIONS

Based on the results of the study, the following conclusions were made: All of the indicators of implementation of education 4.0 were observed to have a relationship with students' communication skills. At the same time, only the cloud-based activity showed a significant relationship with students' ICT learning, and only the adaptive assessment showed a significant relationship with idea organization, signifying the null hypothesis's acceptance. Learners' development of idea articulation and organization for communication, as well as competencies in the utilization of computer technicality, were influenced by provided technology-based assessment in the discussion, while the activities enhanced the students' learning in different

competencies related to information communication technology.

Furthermore, the implementation of Education 4.0 particularly cloud-based activity showed a significant relationship between two of the students' involvement in ICT, particularly the instructor and student interaction and personalized learning path. Also, only inclusivity and ethical awareness showed a significant relationship to peer collaboration, thus signifying acceptance of the null hypothesis, which was based on consideration of students' availability of resources in performing tasks through technology affecting the frequency of usage and interaction.

The following recommendations are offered:

1. Teachers may strengthen the implementation of Education 4.0 in lesson delivery to address students' needs and learning styles through technology utilization and promote inclusivity.
2. Schools may use paperless instruction through the implementation of Education 4.0 in teaching learning process to address student difficulty through constant feedbacking that may lead to mastery of competency.
3. Teachers may design collaborative activities that allow learners to exchange ideas with peers and experts leads to self-understanding of the concept.

REFERENCE

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DEVELOPING ENTREPRENEURIAL COMPETENCIES THROUGH EXPERIENTIAL LEARNING APPROACH

Jeanette Añonuevo David

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This research intends to measure BTLED students' performance in developing entrepreneurial competency in learning entrepreneurship through an experiential learning approach. Specifically, it sought to determine the extent of the experiential learning approach in teaching students' entrepreneurial competencies; the entrepreneurial competencies of the students; the students' performance in the practical task; the significant relationship between the extent of using an experiential learning approach and the level of students' entrepreneurial competencies; and the significant effect on the experiential learning approach to student performance tasks.

The researcher employed a quantitative research design, particularly the descriptive method. The research respondents of this study were composed of eighty-one (81) Bachelor of Technology and Livelihood Education students who were purposively chosen by the researcher based on the needs of this study. The research locale of this study was Southern Luzon State University. The researcher developed a self-made questionnaire as the main research instrument. It is composed of five statements per indicator. The researcher used mean, standard deviation, F-test, and Pearson R-correlation as statistical tools.

The findings of the study were the following; The extent of using the experiential learning approach in teaching entrepreneurial competencies was a great extent; the level of entrepreneurial competencies of the students was very great extent as viewed by the students; The level of student performance in practical was very satisfactory.; it was found that there is a significant relationship between the extent of using an experiential learning approach; and lastly it was found that there is a significant effect on the experiential learning approach to student performance tasks.

Based on the findings it was concluded that the extent of using an experiential learning approach showed there was a significant relationship between students' entrepreneurial competencies. Therefore, the null hypothesis was rejected. Also, it was concluded that the experiential learning approach showed a significant effect on the performance of the students in practical tasks about entrepreneurship. Therefore, rejecting the second null hypothesis.

The research recommends using a variety of instructional strategies, including lectures, films, group projects, guest lecturers, and pair work to involve students in as many learning opportunities; The research recommends that teachers should adopt an interdisciplinary approach that emphasizes learning a single subject from multiple perspectives and a holistic view of the students; The research recommends using a variety of teaching techniques, such as differentiated instruction, progress monitoring, feedback, fostering a positive classroom which can help students perform better in activities; The research recommends introducing a different approach to instruction to improve the performance of the students in activities; Lastly, the study advises students to use project-based learning to plan forward their future

KEYWORDS: students' performance; entrepreneurial competency; learning entrepreneurship

1. INTRODUCTION

Education is a continuous process that responds to the needs and demands of every learner. In a traditional setting, learners view training as a process of only developing skills, attitudes, and qualities required for citizenship and dynamic support in society. Unlike today, more learners view training and education as a product to be used in the marketplace and to be bought and sold by academic institutions wherein the mark is quality which is equivalent to the mark for worldwide competitiveness. Curriculum changes led to the change from a teaching-centered environment into a learner-centered environment. The new curriculum concentrated on the development of skills and competencies through the initiative of the students. It is concentrated on written tests, practical tests, and hands-on activities. Moreover, students can now freely choose what course they want to take.

Experiential learning is to improve students' knowledge and abilities while also involving their emotions. Concrete experience gives information that can be used as a foundation

for reflection, according to David Kolb (1984) as cited by Passarelli, A.M., & Kolb, D.A. (2023). He also observed that individuals who are categorized as "watchers" prefer reflective observation, while those who are categorized as "doers" are more likely to engage in active experimentation. We integrate the knowledge we gained from a concrete experience through reflection, leading to the development of new theories about the world that we either actively or reflectively experiment with.

Entrepreneurship education is a course of study that imparts knowledge on how to launch and grow a business. But as more students become interested in learning about entrepreneurial behavior that isn't always the same as launching a business, this has changed in the last few years (Ratten & Jones, 2018). Because of this, entrepreneurship education is recommended as a means of encouraging students to consider their future professional paths. This means that in addition to start-ups, students also learn about corporate venturing and small business management as potential career paths.



Moreover, Entrepreneurial competency plays a critical role in ensuring continuous growth and success in business. It involves applying knowledge, attitudes, and skills to start a business, ensuring the risk and success of the business are managed effectively. The human factor played by entrepreneurs has increased in importance over the past few decades.

These circumstances inspire the researcher to seek to measure students' performance to develop entrepreneurial competencies through an experiential learning approach. The accomplishment of this study greatly helps the presentation of the topic of entrepreneurship.

1.1 Statement of the Problem

Specifically, it wants to answer the following questions:

1. What is the extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of:
 - 1.1 Abstract Conceptualization;
 - 1.2 Active Experimentation;
 - 1.3 Reflective Observation; and
 - 1.4 Concrete Experience?
2. What is the level of students' entrepreneurial competencies in terms of:
 - 2.1 Innovativeness and Creativity;
 - 2.2 Adaptability and Flexibility;
 - 2.3 Opportunity Recognition;
 - 2.4 Risk Assessment and Management;
 - 2.5 Financial Literacy Management; and
 - 2.6 Ethical and Social Responsibility?
3. What is the level of student's performance in the practical task?
4. Is there a significant relationship between the extent of using an experiential learning approach and the level of students' entrepreneurial competencies?
5. Is there a significant effect on the experiential learning approach to student performance tasks?

2. METHODOLOGY

This study used a quantitative research design, particularly the correctional method that aims to identify the relationship between entrepreneurial competencies and the performance of the students in practical tasks to learn entrepreneurship using an experiential learning approach.

Bhandari, P. (2021), a correlational method examines relationships between them without influencing or changing any of the variables. The direction and/or strength of the

Table 1. Extent Of Using The Experiential Learning Approach In Teaching Students' Entrepreneurial Competencies in terms of Abstract Conceptualization

STATEMENTS	MEAN	SD	REMARKS
I can think of objectives or goals first before planning a business.	3.31	0.46	Strongly Agree
I can think of ways to solve problems encountered in business using a step-by-step approach.	3.15	0.50	Agree
I can explain things about business.	2.96	0.51	Agree
I can easily think about what is right and wrong in business.	3.12	0.60	Agree
I can think of a better solution to solve a problem encountered in business.	2.97	0.53	Agree
<i>Weighted Mean</i>	<i>3.10</i>		
<i>SD</i>	<i>0.35</i>		
<i>Verbal Interpretation</i>	<i>Great Extent</i>		

relationship between two or more variables are reflected in a correlation. A correlation may have a positive or negative direction. Since data collection and interpretation were required to ascertain the study's intended objectives, correlation research methodology was used in this study. The researcher used the correlation research design as a type of methodology for dealing with the variables in the study. This study deals with the student's entrepreneurial competencies and their performance in practical tasks through an experiential learning approach.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions will further characterize the student's performance in developing entrepreneurial competencies through an experiential learning approach.

Extent of Experiential Learning Approach

The experiential learning approach requires that the instructor, who acts as a facilitator of the learning process, and the students both actively participate. Learning by doing is the method used in the experiential learning approach. Students' ability to apply classroom concepts to real-life situations is enhanced through practical activities and reflection. Engaging in experiential learning gives students the confidence to apply their knowledge and abilities in ways that will advance their careers. Additionally, experiential learning equips people with transferable abilities like critical thinking, creativity, innovation, teamwork, and problem-solving. In this study, the extent of the experiential learning approach consists of abstract conceptualization, active experimentation, reflective observation, and concrete experience.

Extent Of Using The Experiential Learning Approach In Teaching Students' Entrepreneurial Competencies in terms of Abstract Conceptualization

Table 1 illustrates the extent of using the experiential learning approach in teaching students entrepreneurial competencies in terms of Abstract Conceptualization.

When exploring the experiential learning approach in teaching entrepreneurial competencies the students strongly agree that they tend to prioritize setting objectives or goals before planning a business (M=3.31, SD=0.46). Moreover, students agree that they can explain things about the business (M=2.96, SD=0.51).



The extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of Abstract Conceptualization attained a weighted mean score of 3.10 and a standard deviation of 0.35 and was a Great Extent among the respondents. This means that the experiential learning approach in teaching entrepreneurial competencies

assists students in abstract conceptualization by encouraging them to engage in real-world experience. Through practical application and hands-on activities, students gain a deeper understanding of abstract concepts they develop the abilities to conceptualize and analyze abstract ideas in meaningful contexts.

Table 2. Extent of Using the Experiential Learning Approach In Teaching Students' Entrepreneurial Competencies in terms of Active Experimentation

STATEMENTS	MEAN	SD	REMARKS
I can make a simple business plan including a financial forecast.	2.80	0.60	Agree
I can set my goals in business before creating and executing a business plan.	3.23	0.55	Agree
I immediately start working out how to apply it in practice when I hear about a new idea or approach.	2.96	0.62	Agree
I can perform tasks like promoting and advertising the products that are assigned to me.	3.09	0.62	Agree
I can usually identify more efficient, realistic ways to do tasks.	3.06	0.53	Agree
<i>Weighted Mean</i>	<i>3.03</i>		
<i>SD</i>	<i>0.42</i>		
<i>Verbal Interpretation</i>	<i>Great Extent</i>		

Table 2 illustrates the extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of Active Experimentation.

When exploring the experiential learning approach in teaching entrepreneurial competencies the students agree that they can set goals before creating and executing a business plan (M = 3.23, SD = 0.55). On the other hand, students also agree that they can create a financial forecast that lays out the necessary steps to generate future income and cover future expenses of their business. (M = 2.80, SD = 0.60).

The extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of Active Experimentation attained a weighted mean score of 3.03 and a standard deviation of 0.42 and was a Great Extent among the respondents. This indicates that by utilizing theories to guide problem-solving and decision-making, the experiential learning approach to teaching entrepreneurial competencies supports students in engaging in active experimentation. Through the students' experimentation with various scenarios, they demonstrate an active learning experience.

Table 3. Extent of Using the Experiential Learning Approach In Teaching Students' Entrepreneurial Competencies in terms of Reflective Observation

STATEMENTS	MEAN	SD	REMARKS
I can understand the business process.	3.09	0.53	Agree
I can easily see where things can be improved.	3.09	0.60	Agree
I can watch and listen to others' ideas and come up with bright ideas.	3.47	0.53	Strongly Agree
I am prepared to work hard for a long time to realize my goals.	3.44	0.59	Strongly Agree
I can accept mistakes and learn from them.	3.72	0.51	Strongly Agree
<i>Weighted Mean</i>	<i>3.36</i>		
<i>SD</i>	<i>0.40</i>		
<i>Verbal Interpretation</i>	<i>Very Great Extent</i>		

Table 3 illustrates the extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of Reflective Observation.

When exploring the experiential learning approach in teaching entrepreneurial competencies the students strongly agree that they can learn from the mistakes that they encounter in managing a business (M = 3.72, SD = 0.51). Also, the students agree that they know the process of building a business (M = 3.09, SD = 0.53) and that they can improve the things that they

want to incorporate into their businesses (M = 3.09, SD = 0.53).

The extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of Reflective Observation attained a weighted mean score of 3.36 and a standard deviation of 0.40 and was a Very Great Extent among the respondents. This means that by using an experiential learning approach, the students would rely on their thoughts and feelings when forming opinions.



Table 4. Extent of Using the Experiential Learning Approach In Teaching Students' Entrepreneurial Competencies in terms of Concrete Experience

STATEMENTS	MEAN	SD	REMARKS
I often act without considering the possible consequences.	2.35	0.79	Disagree
I often find that actions based on feelings are as sound as those based on careful thought and analysis.	2.89	0.65	Agree
I tend to be open about how I'm feeling.	2.94	0.70	Agree
I can lead and motivate others and deliver my visions based on my feelings towards others.	3.09	0.55	Agree
I can deal with people based on respect, integrity, fairness, and truthfulness.	3.53	0.57	Strongly Agree
<i>Weighted Mean</i>	2.96		
<i>SD</i>	0.40		
<i>Verbal Interpretation</i>	<i>Great Extent</i>		

Table 4 illustrates the extent of using the experiential learning approach in teaching students entrepreneurial competencies in terms of Concrete Experience.

When exploring the experiential learning approach in teaching entrepreneurial competencies the students strongly agree that they can deal with people based on respect, integrity, fairness, and truthfulness when operating a business and when communicating with people that belong to their business (M=3.53, SD=0.57). In contrast to this statement, students disagree that they often act without considering the possible consequences in making decisions for their business (M=2.35, SD=0.79).

The extent of using the experiential learning approach in teaching students' entrepreneurial competencies in terms of Concrete Experience attained a weighted mean score of 2.96 and a standard deviation of 0.40 and was a Great Extent among the respondents. This indicates that the students experienced a

variety of scenarios while employing this method. When a student gains new experience or interprets one while starting a business, that is learning. Students actively engage in exercises or training scenarios. This could be role-playing games, participating in simulations, or solving real-world problems as part of corporate training. Students experience real-world business difficulties in an immersive, hands-on learning setting.

Level of Entrepreneurial Competencies

A student must possess a set of abilities and behaviors known as entrepreneurial competencies to establish, grow, manage, and expand a business. To manage some of the risks involved in operating a business, they must have certain competencies. The level of entrepreneurial competencies includes innovativeness and creativity, adaptability and flexibility, opportunity recognition, risk assessment and management, financial literacy management, and ethical and social responsibility.

Table 5. Level of Students' Entrepreneurial Competencies in terms of Innovativeness and Creativity

STATEMENTS	MEAN	SD	REMARKS
I enjoy playing around with ideas to come up with new products.	3.42	0.57	Strongly Agree
I welcome ideas from other people to create new products in my business.	3.60	0.52	Strongly Agree
I can propose new ideas that can lead to the solution of a problem.	3.28	0.51	Agree
I can see that investing in innovation can lead to long-term business growth.	3.35	0.55	Strongly Agree
I can see situations from a variety of perspectives and come up with original ideas.	3.22	0.55	Agree
<i>Weighted Mean</i>	3.38		
<i>SD</i>	0.39		
<i>Verbal Interpretation</i>	<i>Very Great Extent</i>		

Table 5 illustrates the level of students' entrepreneurial competencies in terms of Innovativeness and Creativity.

When developing entrepreneurial competencies, the students strongly agree that they create new products by welcoming ideas from others to have new products in business (M=3.60, SD=0.52). Also, the students agree that they can come up with new ideas by seeing a variety of perspectives from others

(M=3.22, SD=0.55).

The level of students' entrepreneurial competencies in terms of Innovativeness and Creativity attained a weighted mean score of 3.38 and a standard deviation of 0.39 and was Very Great Extent among the respondents. This indicates that students' entrepreneurial competencies enable them to generate new perspectives on the real world and formulate ideas for enhancing or expanding their businesses.



Table 6. Level of Students' Entrepreneurial Competencies in terms of Adaptability and Flexibility

STATEMENTS	MEAN	SD	REMARKS
I am confident that I can handle every challenge that can encounter in my business.	3.00	0.63	Agree
I can quickly adapt to changes.	3.07	0.67	Agree
I always know different ways to deal with sudden change.	2.96	0.60	Agree
When I must change my plans, I stay relaxed and think of better ideas.	3.15	0.63	Agree
I prefer to do things that force me to learn something new.	3.17	0.63	Agree
<i>Weighted Mean</i>	3.05		
<i>SD</i>	0.45		
<i>Verbal Interpretation</i>	<i>Great Extent</i>		

Table 6 illustrates the level of students' entrepreneurial competencies in terms of Adaptability and Flexibility. When developing entrepreneurial competencies, the students agree that they should do things that force them to learn something new to improve their product and adapt to the trends that can attract customers (M=3.17, SD=0.63). Also, students agree that they need to adapt and know different ways to solve problems and deal with sudden business changes (M=2.96, SD=0.60)

The level of students' entrepreneurial competencies in terms of Adaptability and Flexibility attained a weighted mean score of 3.05 and a standard deviation of 0.45 and was a Great Extent among the respondents. This indicates the students are voluntarily adjusting to situations that are always changing. In the process of learning continuously and adapting how they apply their knowledge, skills, and talents to new difficulties as contextual realities change, students can also change their ideas, plans, and priorities to consider new business and product creation scenarios.

Table 7. Level of Students' Entrepreneurial Competencies in terms of Opportunity Recognition

STATEMENTS	MEAN	SD	REMARKS
I look for things that need to be done.	3.32	0.54	Strongly Agree
I can actively seek out new business opportunities depending on the trends, wants, and needs of the customer.	3.28	0.53	Strongly Agree
I like challenges and new opportunities that can develop my business.	3.43	0.50	Strongly Agree
I prefer activities that I know well and with which I am comfortable.	3.51	0.55	Strongly Agree
I can identify external factors that could benefit the business, such as market trends, technological advancements, changes in government policy favoring the business, shifts in consumer behavior that led to increased demand, and market growth.	3.17	0.47	Agree
<i>Weighted Mean</i>	3.34		
<i>SD</i>	0.33		
<i>Verbal Interpretation</i>	<i>Very Great Extent</i>		

Table 7 illustrates the level of students' entrepreneurial competencies in terms of Opportunity Recognition. When developing entrepreneurial competencies, the students strongly agree that they prefer activities that they already know and they are comfortable doing (M=3.51, SD=0.55). While the students agree that they are proficient in identifying external factors that can impact their business, including market trends, technological advancements, government policy changes, consumer behavior shifts, increased demand, and market growth. (M=3.17, SD=0.47).

The level of students' entrepreneurial competencies in terms of Opportunity recognition attained a weighted mean score of 3.34 and a standard deviation of 0.33 and was Very Great Extent among the respondents. This indicates that the students believe that a business opportunity is the most important and initial stage in the journey of an entrepreneur. In particular, in an unexpected condition, those new to the field of entrepreneurship must look for the ideal business opportunity at the ideal moment.

Table 8. Level of Students' Entrepreneurial Competencies in terms of Risk Assessment and Management

STATEMENTS	MEAN	SD	REMARKS
I prefer situations in which I can control the outcomes as much as possible.	3.31	0.46	Strongly Agree
I can examine the impact of potential future events that are relevant to the operations of the business as part of the process of risk management.	3.02	0.50	Agree
I weigh my chances of succeeding or failing before I decide to do something.	3.21	0.52	Agree
I am confident in my ability to assess and manage risks in a business.	3.01	0.60	Agree
I can identify major risks to be considered while creating a business plan, such as market risk, financial risk, operational risk, legal and regulatory risk, and competitive risk.	3.02	0.52	Agree
<i>Weighted Mean</i>	3.12		



SD
Verbal Interpretation

0.33
Great Extent

Table 8 illustrates the level of students' entrepreneurial competencies in terms of Risk Assessment and Management. When developing entrepreneurial competencies, the students strongly agree that they prefer a situation in which they can control the outcomes as much as possible in managing a business (M=3.31, SD=0.46). While the students agree that they are confident in their ability to assess and manage risks that they encountered in business (M=3.01, SD=0.60).

The level of students' entrepreneurial competencies in terms of Risk Assessment and Management attained a weighted mean score of 3.12 and a standard deviation of 0.33 and was a Great Extent among the respondents. This implies that the students are ready in the business to reduce the impact on earnings, wasted time and productivity, and the adverse effect on customers when a risk occurs. Strategic business planning for startups and existing businesses requires the capacity to recognize hazards.

Table 9. Level of Students' Entrepreneurial Competencies in terms of Financial Literacy Management

STATEMENTS	MEAN	SD	REMARKS
I understand the concept of budgeting.	3.30	0.60	Strongly Agree
I am prepared to risk some of my own money when saving or making an investment.	3.23	0.62	Strongly Agree
I can tell the difference between spending money on what customers need and want.	3.37	0.49	Strongly Agree
I can consider many possible alternative opportunities before I invest.	3.27	0.52	Strongly Agree
I can figure out how to budget for a business expense.	3.16	0.56	Agree
<i>Weighted Mean</i>	3.27		
<i>SD</i>	0.40		
<i>Verbal Interpretation</i>	<i>Very Great Extent</i>		

Table 9 illustrates the level of students' entrepreneurial competencies in terms of Financial Literacy Management. When developing entrepreneurial competencies, the students strongly agree that they can tell the difference between spending money on what customers need and want score (M=3.37, SD=0.49). While the students agree that they can figure out how to budget for a business expense (M=3.16, SD=0.56).

The level of students' entrepreneurial competencies in terms of Financial Literacy Management attained a weighted mean score of 3.27 and a standard deviation of 0.40 and was Very Great Extent among the respondents. This indicates that a student who understands finance will probably have complete control over their enterprise. Making more informed business decisions is made possible by having a comprehensive understanding of the meaning of balance sheets and profit and loss statements, which offer an insight into the financial condition of their business.

Table 10. Level of Students' Entrepreneurial Competencies in terms of Ethical and Social Responsibility

STATEMENTS	MEAN	SD	REMARKS
I am willing to put in a great deal of effort beyond what is normally expected to help this business be successful.	3.42	0.54	Strongly Agree
I feel confident that anything I raised would be dealt with fairly.	3.20	0.46	Agree
I treat people in business fairly.	3.69	0.46	Strongly Agree
I trust my leader to do the right thing at business.	3.59	0.52	Strongly Agree
I would accept almost any type of job assignment to keep working for this business.	3.40	0.56	Strongly Agree
<i>Weighted Mean</i>	3.46		
<i>SD</i>	0.35		
<i>Verbal Interpretation</i>	<i>Very Great Extent</i>		

Table 10 illustrates the level of students' entrepreneurial competencies in terms of Ethical and Social Responsibility. When developing entrepreneurial competencies, the students strongly agree that all people will be treated fairly specifically in business (M=3.69, SD=0.46). However, the students agree that they feel confident in anything they raise that would be dealt with fairly (M=3.20, SD=0.46).

score of 3.46 and a standard deviation of 0.35 and was Very Great Extent among the respondents. As a result, the student's ethics will assist them in considering the possible outcomes of their business actions, as well as teach them how to distinguish between right and wrong and control clear frequent mistakes that people make while making decisions.

Level of Student Performance in Practical Task

The level of students' entrepreneurial competencies in terms of Ethical and Social Responsibility attained a weighted mean

Students can be engaged in meaningful learning through the use of performance tasks allowing them to actively showcase their



knowledge and abilities. In developing the student's performance in entrepreneurship subject of BTLED students,

the instructor prepared three practical tasks including product promotion, business plan, and presentation of business.

Table 11 Level of Student's Performance in Practical Task

Student Performance Task 1	Mean	SD	VI
Product Description	4.77	0.41	Outstanding
Customer Definition/Marketing	4.60	0.45	Outstanding
Innovation/ Originality of the Product	4.07	0.18	Very Satisfactory
Cost/ Feasibility/ Budget	4.46	0.50	Outstanding
Presentation Skills	4.38	0.46	Outstanding
Weighted Mean	4.45		
SD	0.31		
Verbal Interpretation			Outstanding
Student Performance Task 2	Mean	SD	VI
Defined Product Being Promoted	4.32	0.47	Outstanding
Outlined the Promotion	3.77	0.60	Very Satisfactory
Defined the Message for the Promotion	2.94	0.28	Satisfactory
Defined the Target Market	3.60	0.45	Very Satisfactory
Quality of Overall PowerPoint Presentation	3.68	0.43	Very Satisfactory
Weighted Mean	3.66		
SD	0.14		
Verbal Interpretation			Very Satisfactory
Student Performance Task 3	Mean	SD	VI
Concept Statement	4.63	0.49	Outstanding
Marketing Plan	4.37	0.66	Outstanding
Financial Statement	3.99	0.37	Very Satisfactory
Management and Organizational Structure	4.39	0.46	Outstanding
Overall Presentation	4.17	0.39	Very Satisfactory
Weighted Mean	4.31		
SD	0.29		
Verbal Interpretation			Outstanding
Average Weighted Mean	4.14		
SD	0.10		
Verbal Interpretation			Very Satisfactory

Table 11 illustrates the level of student performance in the practical task 1, 2, and 3.

When the student performs practical task number 1 entitled creating a product for their business. The student did an outstanding job of defining the use case for a product, which is an essential step in creating and expanding a successful product. It enables the learner to comprehend their target market, clearly state their proposition, and set their product apart from competitors' offerings. (M=4.77, SD=0.41). However, the student did a very satisfactory job demonstrating creativity, which is the ability to create something original that will set the student apart from the student section. This is crucial because a differentiator frequently holds the secret to a business. (M=4.07, SD=0.18).

The level of students' performance in practical task 1 attained a weighted mean score of 4.45 and a standard deviation of 0.31 and was Outstanding among the respondents. This indicates

that when working on a task, the students describe the finished product quite well. It gives a concise and interesting overview of the product and exhibits a thorough understanding of how the product addresses the issue. In addition, the student develops a workable product that could influence the business and is both original and inventive.

When the student performs practical task number 2 entitled Promoting product for their business. The student performs outstandingly in the task of explaining the product that is being promoted (M = 4.32, SD = 0.47). However, when the student did a satisfactory job explaining the promotional message, it was given an acceptable definition (M = 2.94, SD = 0.28).

The level of students' performance in practical task 2 attained a weighted mean score of 3.66 and a standard deviation of 0.14 and was Very Satisfactory among the respondents. This indicates that students can educate, stimulate interest, and



encourage purchases by educating current and potential customers about the product's benefits. It is among the four Ps of the marketing mix, which also includes place, price, and product. Additionally, the students' delivery of the promotional message is acceptable, but it needs to be more enjoyable or lacking in some areas.

When the student performs practical task number 3 entitled Oral presentation of the business plan. The student clearly and comprehensibly communicated the business plan's outstanding concept statement to the stakeholders (M = 4.63, SD = 0.49). Nonetheless, the student did a very satisfactory job of presenting the financial statement for the business plan; both

revenue and costs were supported. Overall good, but not quite clear (M = 3.99, SD = 0.37).

The level of students' performance in practical task 3 attained a weighted mean score of 4.31 and a standard deviation of 0.29 and was Outstanding among the respondents. This indicates that every student took part in the presentation. It was clear, entertaining, and professionally done, with a logical flow. Students can also learn important business skills like financial planning, market research, and strategic planning by writing a business plan. These are fundamental abilities that are beneficial in many aspects of life, not just the business sector.

Table 12. A Significant Relationship Between the Extent of Using an Experiential Learning Approach and the Level of Students' Entrepreneurial Competencies.

		Students Entrepreneurial Competencies						
		Innovativeness and Creativity	Adaptability and Flexibility	Opportunity Recognition	Risk Assessment and Management	Financial Literacy Management	Ethical and Social Responsibility	
Experiential Learning Approach								
Abstract Conceptualization	Pearson Correlation	0.478	0.558	0.307	0.435	0.473	0.411	
	Sig. (2-tailed)	0.000	0.252	0.000	0.713	0.000	0.000	
	N	80	80	80	80	80	80	
	Analysis	Significant	NS	Significant	NS	Significant	Significant	
Active Experimentation	Pearson Correlation	0.603	0.619	0.514	0.544	0.595	0.481	
	Sig. (2-tailed)	0.000	0.6	0.000	0.037	0.000	0.000	
	N	80	80	80	80	80	80	
	Analysis	Significant	NS	Significant	Significant	Significant	Significant	
Reflective Observation	Pearson Correlation	0.486	0.545	0.589	0.471	0.47	0.537	
	Sig. (2-tailed)	0.739	0.000	0.642	0.000	0.042	0.016	
	N	80	80	80	80	80	80	
	Analysis	NS	Significant	NS	Significant	Significant	Significant	
Concrete Experience	Pearson Correlation	0.293	0.341	0.162	0.333	0.312	0.186	
	Sig. (2-tailed)	0.000	0.087	0.000	0.001	0.000	0.000	
	N	80	80	80	80	80	80	
	Analysis	Significant	NS	Significant	Significant	Significant	Significant	

*p<0.05

Table 12 presents the significant relationship between the extent of using an experiential learning approach and the level of students' entrepreneurial competencies.

The experiential learning approach in terms of Abstract conceptualization has a significant relationship with students' entrepreneurial competencies in terms of innovativeness and creativity, opportunity recognition, financial literacy management, and ethical and social responsibility. While in



terms of adaptability and flexibility risk assessment and management is not significant. The obtained sig. (2-tailed) ranging from 0.000 to 0.713 with a very weak to strong correlation and p-values (0.000) which were lower than the 0.05 level of significance. This implies that the abstract conceptualization, at this point, students comprehend events or difficulties using concepts, logical methods, and theories rather than interpersonal conflicts or emotions.

In terms of active experimentation has a significant relationship with students' entrepreneurial competencies in terms of innovativeness and creativity, opportunity recognition, risk assessment and management, financial literacy management, and ethical and social responsibility. While in terms of adaptability and flexibility is not significant. The obtained sig. (2-tailed) ranging from 0.000 to 0.6 with a very weak to strong correlation and p-values (0.000) which were lower than the 0.05 level of significance. This indicates that the students are in an active stage, they exhibit their active learning by experimenting with different situations. During the active experimentation stage, students use a hands-on approach or engage in practical tasks rather than just watching a scenario.

In terms of reflective observation has a significant relationship with students' entrepreneurial competencies in terms of

adaptability and flexibility, risk assessment and management, financial literacy management, and ethical and social responsibility. In terms of innovativeness and creativity, opportunity recognition is not significant. The obtained sig. (2-tailed) ranging from 0.000 to 0.739 with a very weak to strong correlation and p-values (0.000) which were lower than the 0.05 level of significance. This indicates that students comprehend concepts and circumstances from a variety of perspectives at this point. Based on their emotions and ideas, the students form an opinion.

Lastly, in terms of concrete experience has a significant relationship with students' entrepreneurial competencies in terms of innovativeness and creativity, opportunity recognition, risk assessment and management, financial literacy management, and ethical and social responsibility. While in terms of adaptability and flexibility is not significant. The obtained sig. (2-tailed) ranging from 0.000 to 0.087 with a very weak to strong correlation and p-values (0.000) which were lower than the 0.05 level of significance. This indicates that the student is demonstrating personal interaction with people in everyday situations at this point. When faced with real-world scenarios, learners are more likely to rely on their emotions, their open minds, and their ability to adjust to change than they are on methodical problem-solving techniques.

Table 13. Regression Analysis on the Experiential Learning Approach to Student Performance Tasks

Student's Performance Task	B	SE	β	t	p
Constant	4.11	0.25		16.49	0.00
Abstract Conceptualization		0.08	0.20	2.44	0.02
Active Experimentation		0.07	-0.22	-2.54	0.01
Reflective Observation		0.07	0.12	0.75	0.46
Concrete Experience		0.06	-0.13	-1.18	0.24
R-squared			0.13		
Adjusted R-squared			0.09		
Standard Error of the Estimate		0.21			
F(4, 76)				2.96	0.02

*p < 0.05

Table 13 presents the significant effect of the experiential learning approach on the students' performance task.

In the experiential learning approach, the p-value gained in terms of abstract conceptualization is 0.02, and active experimentation is 0.01 has a significant effect on the student's performance in tasks. While in terms of reflective experimentation is 0.46 and concrete experience is 0.24 have no significant effect on the student's performance in tasks. This implies that through experiential learning, students are allowed to actively participate in creating solutions to problems. The students apply ideas, logical methods, and theories to comprehend situations or problems rather than interpersonal issues or feelings.

4. CONCLUSION AND RECOMMENDATIONS

In view of the findings of the study, the researcher concluded the following:

It was concluded that the extent of using an experiential learning approach in terms of abstract conceptualization, active experimentation, reflective observation, and concrete experience showed there was a significant level of students' entrepreneurial competencies in terms of innovativeness and

creativity, adaptability and flexibility, opportunity recognition, risk assessment and management, financial literacy management, and ethical and social responsibility. This means the teacher used approaches that can support the learning process of the students to develop their entrepreneurial competencies. Therefore, the null hypothesis was rejected.

It was concluded that the experiential learning approach showed a significant effect on the performance of the students in practical tasks. This means the instructors must know the approach that will be used in teaching the entrepreneurial competencies of the students to increase their performance in practical tasks. The respondents view the approach used by the instructor as not so much affecting their performance on the task that it depends on their ability to perform the tasks. Therefore, the null hypothesis was rejected.

Considering the findings and conclusions, the following recommendations are offered:

1. The research recommends using a variety of instructional strategies, including lectures, films, group projects, guest



- lecturers, and pair work to involve students in as many learning opportunities.
2. The research recommends that teachers should adopt an interdisciplinary approach that emphasizes learning a single subject from multiple perspectives and a more holistic view of the students.
 3. The research recommends using a variety of teaching techniques, such as differentiated instruction, extra support through focused interventions, progress monitoring, and feedback, fostering a positive classroom environment, and working with parents, which can help weaker students perform better in activities.

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SELF-DESIGNED ANIMATED CLIPS AS SUPPLEMENTARY MATERIALS TO IMPROVE VIEWING COMPREHENSION OF GRADE 7 ENGLISH LEARNERS OF DAYAP NATIONAL HIGH SCHOOL S.Y. 2023-2024

Marlyn Imperio Legaspi

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study on the use of animated clips as supplementary materials to improve viewing comprehension of Grade 7 English Learners implemented in the scenario of the English Curriculum subject where there are no suggested and approved video animated materials to be used by Grade 7 English Teachers to aid their English Lessons with viewing comprehension that are aligned to the English 7 Most Essential Learning Competencies were considered in determining the significant effects of self-designed animated clips in the viewing comprehension of Grade 7 English students at Dayap National High School for the academic year 2023-2024.

Descriptive research design was unutilized for the pretest and posttest and in describing the level of the significant effects of self-designed animated clips in the viewing comprehension. Purposive-Stratified sampling technique was used to obtain one hundred fifty 150 respondents from Grade-7 English students i.e., thirty-seven 37 to forty 40 students from each Grade-7 class.

Analysis revealed that the animated clips as supplementary material resulted in very high ratings. The level of viewing comprehension of learners with the used of self-animated clips on English Lessons indicated a significant progress on all types of comprehension. This means that learners have great capacity for growth and development throughout the weeks. Therefore, using animated-clips and viewing lessons and activities help learners develop ability to analyze and enhance their viewing skills. The level of the students' pre-test and post-test resulted in a great improvement from Good into Very Good and Outstanding stages. The test of difference between the pretest and posttest revealed that there is a significant difference between the level of students' viewing comprehension in English. Nevertheless, the study showed that Animated Clips affects the students' viewing comprehension of the subject.

With the use of the self-animated clips for four weeks the researcher found out that there is a significant difference on assessment scores for each week, indicating improvement in student's performance on their English Class. This implied the effectiveness of the used of self-animated clips employed during the study in enhancing learner's learning and understanding and be able to apply their knowledge and skills to different types of comprehension tasks.

Based on the results and conclusion, it is recommended that English teachers may integrate the use of their self-designed animated clips in their English lessons because it can be of great help to improve the viewing comprehension of their learners. English teachers can showcase animated clips and other related learning tools for an innovative learning approach. It can also be one of the topics worth sharing on a series of webinars to ensure the learning quality to the students.

KEYWORDS: animated clips; supplementary materials; viewing comprehension

1. INTRODUCTION

In various field of education, the integration and use of multimedia materials become essential and necessary to engage students and enhance their understanding and comprehension of difficult context and subject. This study investigates the possible advantages of using self-designed animated clips as supplementary learning resources in the context of a Grade 7 English curriculum to enhance viewing skills, keeping with the evolution of education.

In the 21st-century classroom set-up innovative ways or approaches to teaching and learning are necessary and it should offer unique mix of problems and opportunities. Teacher needs to adjust to digital age and use multimedia teaching and learning resources that are interactive, engaging and visually stimulating. Students benefit from the high-tech approach to teaching and learning in the classroom. In the classroom, many

teachers use laptops, tablets, and even cell phones. Some teachers utilize the use of internet to offer assignments.

Technology helps aid the learning and teaching process in school nowadays and plays a vital part/role in the classroom setup in providing visuals and learning materials. Integration of technology to support learning in the modern education is necessary. Education aims nowadays is to equip students with knowledge and skills needed for the real world (IGI Global, 2021) by integrating technology- based and enhanced learning (World Economic Forum, 2021). Due to the evolving technological landscape in education, teachers and teacher education institutions and universities face challenges in keeping up with educational trends (Montealegre, 2019). Hence, all of the educators must be ready with 21st-century skills but the learners. Therefore, teachers should be proficient and effective in using and integrating online platforms and



resources to create an engaging and interactive learning experiences for their learners. By integrating technology into their teaching practices, teachers can cater to different learning styles and provide personalized learning opportunities for their students. Additionally, technology can help teachers track student progress, provide immediate feedback, and facilitate communication and collaboration among students. Specifically, language teachers are expected to acquire the 21st-century digital skills (van Laar et al., 2020) to guide and enhance students' skills acquisition efficiently. A good teacher has the adaptability and flexibility to address the educational challenges ahead, wisely utilizing the resources and materials that are available for teaching and learning. Knowing the ways how different stakeholders of the education such as researchers and co-educators can collaborate in evaluating materials in the teaching-learning process can be a great help. (Lim 2022). The use of technology provides new opportunities for delivering instructions to students. Mobile Devices such as laptops, personal digital assistants, and mobile phones have become a great influence learning tool for students to survive in this digitized era of education.

Therefore, the researcher thought of using self-designed animated clips on Grade 7 English lessons to see if they were indeed effective and enhance the viewing comprehension of Grade 7 English Learners.

1.1 Statement of the Problem

This aims to answer the following questions:

1. What is the level of self-design animated clips in terms of:
 - 1.1 Content Appeal
 - 1.1.1. Accessibility;
 - 1.1.2. Emotional Impact;
 - 1.1.3 Storytelling;
 - 1.1.4 Accurate Information?
 - 1.2 Visual Appeal
 - 1.2.1 Color;
 - 1.2.2 Shape;
 - 1.2.3 Lighting;
 - 1.2.4 Movement;

- 1.2.5 Typography (Text)?
2. What is the level of viewing comprehension of Grade 7 English students in terms of:
 - 2.1 literal;
 - 2.2 inferential;
 - 2.3 appreciation;
 - 2.4 reorganization;
 - 2.5 evaluation?
3. What is the level of student's comprehension in terms of pre-test and post-test assessment?
4. Is there a significant difference between the pre-test and post-test assessment scores of students?
5. Does self-designed animated clips has significant effect on the viewing comprehension of Grade 7 English students of Dayap National High School?

2. METHODOLOGY

The descriptive research design was utilized in the study and determine the significant effect of self-designed animated clips in the viewing comprehension of Grade 7 English learners. The researcher specifically used pre-test and post-test assessment where the respondents was purposively chosen to be part of the study. The selected grade 7 learners were exposed to the viewing of animated clips during their learning process in English.

3. RESULTS AND DISCUSSION

This chapter present, analyzes and interprets the data gathered that showed significant difference between the performance of the students in formative and the summative test, also the significant effect of utilizing self-designed animated clips on viewing comprehension of the students.

Level of Self-design Animated Clips

Level of self – design animated clips in terms of content include accessibility, emotional impact, shareability, storytelling and accurate and was determine by mean and standard deviation.

Table 1. Level of Self-Design Animated Clips in Terms of Content as to Accessibility

STATEMENTS	MEAN	SD	REMARKS
<i>The animated clips are convenient to use at any place and time and can be a tool for studying independently.</i>	4.48	0.70	Strongly Agree
<i>The animated clips were accessible to students with diverse learning needs.</i>	4.38	0.74	Strongly Agree
<i>The animated clips made the approach to English lessons easy and updated.</i>	4.42	0.76	Strongly Agree
<i>The animated clips are easy to access and use by the teacher and students.</i>	4.31	0.77	Strongly Agree
<i>The content of the animated clips is easier to understand and can be applied to real-life scenarios.</i>	4.49	0.69	Strongly Agree
Weighted Mean		4.42	
SD		0.73	
Verbal Interpretation		Very High	

Table 1 present the results of a survey on the level of self-designed animated clips in terms of content accessibility.

Respondents strongly agree that the content of the animate clips animated clips are convenient to use at any place and time and



can be a tool for studying independently– situation ($m= 4.48$, $SD= 0.70$). Furthermore, animated clip is easy to access and use by the teachers and students. ($M=4.31$, $SD 0.77$).

The overall mean of 4.42 and the standard deviation of 0.73 imply a very high level of assessment on the self -design animated clips. This means that self-designed animated clips are highly accessible in terms of content and are effective in explaining lessons clearly to students with diverse learning needs.

Table 2 presents the Level of Self-Design Animated Clips in Terms of Content as to Emotional Impact. The respondents assessed the level of Self-Designed Animated Clips in terms of Content as to Emotional Impact as revealed in the following table, which shows the mean, standard deviation, and verbal

interpretation.

To a very high extent, the respondents strongly agreed that the emotional themes depicted in the animated clips were relatable have a mean of 4.36 and standard deviation of 0.74 ($M=4.36$, $SD=0.74$). The animated clips effectively conveyed a range of emotions, such as joy, sadness, excitement, or empathy with a mean of 4.27 and a standard deviation of 0.91 ($M=4.27$, $SD=0.91$) both with the verbal interpretation of Strongly Agree.

It is also observed that the third statement has a mean of 4.22 and standard deviation of 0.83 ($M=4.22$, $SD=0.83$) with the verbal interpretation of Strongly Agree. The fourth statement has a mean of 4.23 and SD of 0.82. The fifth statement has a mean of 4.39 and SD of 0.93. It reveals that the fifth statement has the highest mean and standard deviation.

Table 2. Level of Self-Design Animated Clips in Terms of Content as to Emotional Impact

STATEMENTS	MEAN	SD	REMARKS
<i>The emotional themes depicted in the animated clips were relatable.</i>	4.36	0.74	Strongly Agree
<i>The animated clips effectively conveyed a range of emotions, such as joy, sadness, excitement, or empathy.</i>	4.27	0.91	Strongly Agree
<i>The emotional impact enhanced my engagement with the content.</i>	4.22	0.83	Strongly Agree
<i>The animated clips use of appropriate music, sound effects, and/or voiceover to create mood, add realism, and bring the drawings to life.</i>	4.23	0.82	Strongly Agree
<i>The animated clips can make learning meaningful and fun.</i>	4.39	0.93	Strongly Agree
Weighted Mean		4.29	
SD		0.85	
Verbal Interpretation		Very High	

The overall mean ($M=4.29$, $SD=0.85$) for the level of Self-Designed Animated Clips in terms of Content as to Emotional

Impact indicates how data scores are homogeneous to each other and verbally interpreted as Very High.

Table 3. Level of Self-Design Animated Clips in Terms of Content as to Shareability

STATEMENTS	MEAN	SD	REMARKS
<i>The animation clips capture attention quickly and maintains viewer interest throughout, encouraging viewers to share it with others.</i>	4.45	0.70	Strongly Agree
<i>The content of the animated clips is suitable for sharing on social media platforms.</i>	4.40	0.73	Strongly Agree
<i>The animated clips include humor or entertainment, making it more likely to be shared because viewers enjoy content that makes them laugh or smile.</i>	4.32	0.77	Strongly Agree
<i>The animated clips are short enough to be easily watched and shared on social media platforms.</i>	4.25	0.75	Strongly Agree
<i>The animated clips address current events or trends, making it more likely to be shared as viewers find it relevant and engaging.</i>	4.28	0.78	Strongly Agree
Weighted Mean		4.34	
SD		0.75	
Verbal Interpretation		Very High	

Table 3 shows the level of Self-Designed Animated Clips in terms of Content as to Shareability.

As shown in the data, most of the students *Strongly Agreed* that the animation clips capture attention quickly and maintains viewer interest throughout, encouraging viewers to share it with

others with a mean of 4.45 and standard deviation of 0.70 ($M=4.45$, $SD=0.70$). The second statement, the content of the animated clips is suitable for sharing on social media platforms.has a mean of 4.40 and standard deviation of 0.73 ($M=4.40$, $SD=0.72$) verbally interpreted as Strongly Agree.



Furthermore, the third statement has a mean of 4.32 and a standard deviation of 0.77 ($M=4.32, SD=0.77$). The fourth statement has mean of 4.25 and SD of 0.75. The fifth statement has a mean of 4.28 and SD of 0.78.

The overall mean ($M=4.34, SD=0.75$) for the level of Self-Designed Animated Clips in terms of Content as to Shareability indicates how data scores are homogeneous to each other. This implies that students are strongly agreed that Self-Designed Animated Clips as to Shareability has a Very High interpretation.

Table 4 shows the level of Self-Design Animated Clips in Terms of Content as to Storytelling

The table indicates the weighted mean, standard deviation, and the interpretation for each statement on the questionnaire for the level of Self-Designed Animated Clips in terms of Content as to Storytelling. The first statement has a mean of 4.47 and a standard deviation of 0.72 with a remark of Strongly Agree. The second statement has a mean of 4.25 and a standard deviation 0.81 and based on the Likert scale can be interpreted as Strongly Agree. The third statement has a mean of 4.09 and SD of 0.98 which can be interpreted as Agree. The fourth and fifth statement has a mean of 4.10 and 4.40 consecutively.

Table 4. Level of Self-Design Animated Clips in Terms of Content as to Storytelling

STATEMENTS	MEAN	SD	REMARKS
<i>The animated clips follow a structured plot with a clear beginning, middle, and end, having a logical sequence.</i>	4.47	0.72	Strongly Agree
<i>The timing of dialogue, action, and visual cues effectively tells the intended narrative.</i>	4.25	0.81	Strongly Agree
<i>The narrative structure of the animated clips conveys a clear message and explores a significant theme that connects with the audience.</i>	4.09	0.98	Agree
<i>The transitions between scenes are smooth and contribute to the overall flow of the narrative.</i>	4.10	1.02	Agree
<i>The animated clips narrative invites audience participation and interaction, encouraging viewers to share their thoughts and reactions with others.</i>	4.40	0.85	Strongly Agree
Weighted Mean		4.26	
SD		0.90	
Verbal Interpretation		Very High	

Furthermore, with an overall mean computed of 4.26, the researcher found out that the level of Self-Designed Animated Clips in terms of Content as to Storytelling is Very High.

Table 5 presents the results of a survey on the level of self-designed animated clips in terms of Accurate Information. Respondents strongly agreed that the information presented in the animated clips was factual and reliable, cited sources or

provided evidence to support the information ($M= 4.45$), The content of the animated clips is sufficient and beneficial in learning English Lessons. ($M= 4.19$). Furthermore, the information from these animated clips is used for academic or learning purposes and allow the organization of English concepts and ideas effectively. ($M=4.02$). The fourth and fifth statement has a mean of 3.67 and 4.55 consecutively.

Table 5. Level of Self-Design Animated Clips in Terms of Content as to Accurate Information

STATEMENTS	MEAN	SD	REMARKS
<i>The information presented in the animated clips was factual and reliable, cited sources or provided evidence to support the information.</i>	4.45	0.82	Strongly Agree
<i>The content of the animated clips is sufficient and beneficial in learning English Lessons.</i>	4.19	0.75	Agree
<i>The information from these animated clips is used for academic or learning purposes and allow the organization of English concepts and ideas effectively.</i>	4.02	0.94	Agree
<i>The representation of ideas and concepts is well presented.</i>	3.67	1.16	Agree
<i>The learning goal in the animated clips is to expand English capabilities.</i>	4.55	0.68	Strongly Agree
Weighted Mean		4.18	
SD		0.94	
Verbal Interpretation		Very High	



The overall mean of 4.18 and the standard deviation of 0.68 implies a very high level of assessment on the self -design animated clips. This means that self-designed animated clips are highly accessible in terms of accurate information and are effective in explaining lessons with a very concise and precise information.

Level of Self-design Animated Clips in terms of Visual Appeal

Level of Self-design Animated Clips in terms of visual appeal comprises color, shape, lighting, movement and typography and was determined by mean and standard deviation.

Table 6 show the results of assessment on the level of self-designed animated clips in terms of visual appeal, specifically focusing on color.

Respondents strongly agree that the color use in self-design animated clips was visually appealing and eye catching (M=4.29, 0.82), convey the mood or tone (M= 4.14, SD= 0.94). The overall mean of 4.23 and the standard deviation of 0.86 show a very high level of assessment in the color of self-designed animated clip. This indicates that the animated clips that were created have a strong visual appeal due to their consistent use of color, ability to successfully portray a mood or tone, and overall consistency.

Table 6. Level of Self-Design Animated Clips in Terms of Visual Appeal as to Color

STATEMENTS	MEAN	SD	REMARKS
<i>The color palette used in the animated clips was visually appealing and eye catching.</i>	4.29	0.82	Strongly Agree
<i>The colors effectively conveyed mood or tone.</i>	4.27	0.78	Strongly Agree
<i>The color scheme was consistent and visually appealing throughout the animated clips.</i>	4.14	0.94	Agree
<i>Used diverse range of colors that adds visual interest and prevents monotony, keeping the audience engaged throughout the animation.</i>	4.19	0.85	Agree
<i>There is a balance between light and dark colors, as well as between warm and cool tones, to create visual contrast and interest within the scene.</i>	4.27	0.88	Strongly Agree
Weighted Mean		4.23	
SD		0.86	
Verbal Interpretation		Very High	

Table 7 shows the results of assessment on the level of self-designed animated clips in terms of visual appeal, specifically

focusing on shape.

Table 7. Level of Self-Design Animated Clips in Terms of Visual Appeal as to Shape

STATEMENTS	MEAN	SD	REMARKS
<i>The shapes and forms used in the animated clips were visually interesting.</i>	4.39	0.79	Strongly Agree
<i>The shapes and forms helped communicate the content effectively.</i>	4.37	0.76	Strongly Agree
<i>The shapes and visual elements used in the animated clips helped clarify complex concepts.</i>	4.01	1.08	Agree
<i>Uses different shapes makes the animation visually interesting, avoiding boredom and keeping viewers engaged.</i>	3.96	1.07	Agree
<i>The shapes stay consistent in size and style throughout the animation, ensuring a unified look.</i>	4.49	0.66	Strongly Agree
Weighted Mean		4.24	
SD		0.92	
Verbal Interpretation		Very High	

Respondents strongly agree that the shapes and forms in the animated clips were visually interesting (M=4.39, 0.79), helped communicate the content effectively (M= 4.37, SD= 0.76). The overall mean of 4.24 and the standard deviation of 0.92 show a very high level of assessment in the shape of self-designed animated clip. This indicates that the animated clips that were created have a strong visual appeal due to their consistent use of shape, ability to successfully clarify complex concepts.

Table 8 shows the level of Level of Self-Designed Animated Clips in terms of Visual Appeal as to Lighting. As revealed in the following table, which shows the average mean, standard deviation, and its verbal interpretation.

As shown in the data, most of the students Strongly Agreed that Lighting techniques are skillfully applied to prevent any visual flaws or inconsistencies in the animated clips. (M=4.44, SD=0.97). Also, lighting enhanced the visual appeal (M=4.27,



SD=0.83)
 The overall mean (M=4.11, SD=0.97) for the level of Self-Designed Animated Clips in terms of Visual Appeal as to Lighting indicates how data scores are homogeneous to each

other. This implies that students are strongly agreed that Visual Appeal of Animated Clips as to Lighting is High.

Table 8. Level of Self-Design Animated Clips in Terms of Visual Appeal as to Lighting

STATEMENTS	MEAN	SD	REMARKS
<i>The lighting effects in the animated clips enhanced the visual appeal.</i>	4.27	0.83	Strongly Agree
<i>Lighting was used effectively to create atmosphere or emphasis.</i>	4.23	0.86	Strongly Agree
<i>The use of visual lighting in animated clips optimized for better learning outcomes.</i>	3.78	1.07	Agree
<i>Lighting brings out the textures and details of characters and objects, making them more vivid and interesting.</i>	3.83	1.10	Agree
<i>Lighting techniques are skillfully applied to prevent any visual flaws or inconsistencies in the animated clips.</i>	4.44	0.74	Strongly Agree
Weighted Mean		4.11	
SD		0.97	
Verbal Interpretation		High	

Table 9 show the results of assessment on the level of self-designed animated clips in terms of visual appeal, specifically focusing on movement.

focus (M= 4.34, SD= 0.82). The overall mean of 4.16 and the standard deviation of 0.98 show a high level of assessment in the movement of self-designed animated clip. This indicates that the animated clips that were created have movement that is smooth, engaging and conveyed information that added interest.

Respondents strongly agree that the movement are smooth and expressive and it is synchronized with the movements of in the background. (M=4.45. 0.73), guide the viewer's attention and

Table 9. Level of Self-Design Animated Clips in Terms of Visual Appeal as to Movement

STATEMENTS	MEAN	SD	REMARKS
<i>The movement and animation in the clips were smooth, engaging, and conveyed information that added interest.</i>	4.32	0.82	Strongly Agree
<i>Movement was used strategically to guide the viewer's attention and focus.</i>	4.34	0.82	Strongly Agree
<i>The movement in the animated clips provides visual clarity.</i>	3.97	1.11	Agree
<i>Movement in animation clips is fitting for the story line and characters.</i>	3.70	1.16	Agree
<i>The movements of the character in the animated clips are smooth and expressive and it is synchronized with the movements of in the background.</i>	4.45	0.73	Strongly Agree
Weighted Mean		4.16	
SD		0.98	
Verbal Interpretation		High	

Table 10 show the results of assessment on the level of self-designed animated clips in terms of Typography (Text)

STATEMENTS	MEAN	SD	REMARKS
<i>The typography (text) used in the animated clips was clear and easy to read.</i>	4.35	0.84	Strongly Agree
<i>Typography was used creatively to enhance the visual appeal.</i>	4.43	0.81	Strongly Agree
<i>The typography (text) was integrated seamlessly into the animated clips.</i>	4.59	0.62	Strongly Agree
<i>Basic terminology is used, presented in an orderly manner and easier to understand.</i>	3.81	1.02	Agree
<i>Uses precise language to convey message in a concise manner.</i>	3.84	1.08	Agree
Weighted Mean		4.20	
SD		0.94	
Verbal Interpretation		High	



The respondents assessed the level of Self-Designed Animated Clips in terms of Visual Appeal as to Typography (Text) as shown in Table 10 evaluated by the grade 7 students. It was observed that the typography (text) seamlessly into the animated clips (M= 4.59, SD= 0.62) and typography was used creatively to enhance the visual appeal (M= 4.43, SD= 0.81)

The overall mean (M= 4.20, SD= 0.94) for the level of self-designed animated clips in terms of visual appeal as to typography (text), indicates how data scores are homogeneous to each other with a remark of High.

Table 10. Level of Self-Design Animated Clips in Terms of Visual Appeal as to Typography (Text)

Level of Viewing Comprehension

Level of Viewing comprehension of the students in Pretest and Posttest assessment include literal, inferential, appreciation recognition and evaluation and was measured by mean and standard deviation.

Table 11 reveal the level of viewing comprehension of the students in terms of Pretest and Posttest. Based on the results of the table, it can be observed that the students made significant progress in their viewing comprehension skills over the course of the study. The mean scores for each type of comprehension increased from the pre-test to the post-test, indicating improvement in understanding and interpreting English texts. The students' performance in the post-test was generally outstanding or very good across all types of comprehension. This means that they were able to effectively analyze and interpret literal, inferential, appreciation, reorganization, and evaluation aspects of the texts. The results imply that the teaching methods and strategies used during the study were effective in enhancing the students' understanding and comprehension of English texts. It also indicates that the students were able to apply their knowledge and skills to different types of comprehension tasks.

Table 11. Level of Viewing Comprehension of the Students

		Pre-test			Post-Test			
		Mean	SD	Remarks	Mean	SD	Remarks	
Week 1	Literal	4.87	1.59	Good	Literal	8.12	1.24	Outstanding
	Inferential	4.87	1.27	Good	Inferential	8.13	1.23	Outstanding
	Appreciation	4.61	1.42	Good	Appreciation	8.06	4.22	Outstanding
	Reorganization	4.65	1.16	Good	Reorganization	7.22	1.48	Very Good
	Evaluation	4.94	1.23	Good	Evaluation	8.09	1.32	Outstanding
Week 2	Literal	3.87	1.57	Fairly Satisfactory	Literal	8.43	1.14	Outstanding
	Inferential	4.57	1.67	Good	Inferential	7.85	1.51	Very Good
	Appreciation	4.70	1.69	Good	Appreciation	7.67	1.51	Very Good
	Reorganization	4.83	1.18	Good	Reorganization	8.61	8.50	Outstanding
	Evaluation	5.76	5.00	Good	Evaluation	8.09	1.32	Outstanding
Week 3	Literal	4.47	1.50	Good	Literal	8.07	1.28	Outstanding
	Inferential	4.94	2.08	Good	Inferential	8.32	1.10	Outstanding
	Appreciation	4.74	1.49	Good	Appreciation	8.05	1.29	Outstanding
	Reorganization	4.61	1.18	Good	Reorganization	7.39	1.49	Very Good
	Evaluation	4.91	1.24	Good	Evaluation	8.26	4.33	Outstanding
Week 4	Literal	4.48	0.70	Good	Literal	8.15	1.24	Outstanding
	Inferential	4.42	0.76	Good	Inferential	7.96	1.37	Very Good
	Appreciation	4.71	1.44	Good	Appreciation	8.15	4.20	Outstanding
	Reorganization	4.68	1.15	Good	Reorganization	7.41	1.49	Very Good
	Evaluation	4.93	1.24	Good	Evaluation	8.46	4.27	Outstanding

Furthermore, the consistent improvement in the mean scores throughout the weeks demonstrates the students' ability to progress and build upon their previous knowledge. This indicates their capacity for growth and development in viewing comprehension.

Table 12 shows the Significant Difference between the Pre-test and Post-test assessment scores of students in four different weeks assessed by the researcher. The pre-test and post-test are parallel and aligned in Grade 7 English MELC and done during the Third Quarter of S. Y. 2023-2024



Table 12. Significant Difference between the Pre-test and Post-test assessment scores of students

Indicator	Pre-test		Post-test		Mean Difference	95% CI		t	df	p
	M	SD	M	SD		L	U			
Week 1	23.94	3.07	39.61	5.12	15.67	-16.662	-14.684	-31.314	149	0.000
Week 2	23.73	5.74	40.65	8.98	16.91	-18.684	-15.143	-18.878	149	0.000
Week 3	23.66	3.46	40.09	5.01	16.43	-17.383	-15.484	-34.198	149	0.000
Week 4	23.22	2.55	40.14	6.63	16.92	-18.026	-15.814	-30.227	149	0.000

The table indicates that there is a significant difference between the pre-test and post-test assessment scores of students for each week of the study. The mean difference in the pre-test and post-test of 15.67-16.92 scores is positive for all weeks, indicating an improvement in the students' performance. The t-values are large and negative, indicating a substantial difference between the pre-test and post-test scores. The p-values are all less than

0.05 level of significance, indicating a highly significant difference. Overall, the results indicates that the students' performance significantly improved from the pre-test to the post-test assessments in each week of the study. This implies the effectiveness of the intervention or teaching methods employed during the study in enhancing the students' learning and understanding.

Table 13. Significant effects of Self-designed Animated Clips to the viewing comprehension of Grade 7 Students in English

Indicator	Beta	SE	95 % CI		β	P
			LL	UL		
<i>Literal</i>	-.569	.283	-1.128	-.010	-.163	.046*
<i>Inferential</i>	.364	.305	-.239	.966	.098	.235
<i>Appreciation</i>	-.220	.819	-1.838	1.398	-.022	.789
<i>Reorganization</i>	.416	.939	-1.440	2.272	.036	.659
<i>Evaluation</i>	1.382	.874	-.344	3.109	.129	.116

p<0.05 significant

Table 13 show the significant effect on using self -design animated clips to the viewing comprehension of grade 7 in English subject. Self-design animated clips show significant effect on the viewing comprehension, of the students in terms of literal. The effect is statistically significant at $p < .05$ this only indicate that students are better able to grasp and remember factual information conveyed through the animated content, understanding the storyline, identifying key events, recognizing characters, or comprehending explicit messages or information presented in the clips. While self -design animated clip does not show significant effect viewing comprehension in terms of inferential appreciation and recognition all the $p > 0.05$.

Furthermore, assessments aid to develop critical thinking and problem-solving skills as learners are encouraged to analyze and evaluate information to generate well-organize and truthful responses.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, the following conclusions were made.

With the use of the self-animated clips for four weeks the researcher found out that there is a significant difference on assesmtment scores for each week, indicating improvement in student's performance on their English Class. This implied the effectiveness of the used of self-animated clips employed during the study in enhancing learner's learning and

understanding and be able to apply their knowledge and skills to different types of comprehension tasks.

The level of viewing comprehension of the students in terms of Pretest and Posttest observed that the students made significant progress in their viewing comprehension skills over the course of the study. The mean scores for each type of comprehension increased from the pre-test to the post-test, indicating improvement in understanding and interpreting English texts. The students' performance in the post-test was generally outstanding or very good across all types of comprehension. This means that they were able to effectively analyze and interpret literal, inferential, appreciation, reorganization, and evaluation aspects of the texts. The results imply that the teaching methods and strategies used during the study were effective in enhancing the students' understanding and comprehension of English texts. It also indicates that the students were able to apply their knowledge and skills to different types of comprehension tasks. To summarized, it can be concluded that self-designed animated clips have significant effects on certain aspects of viewing comprehension among Grade 7 English students, particularly in appreciation, reorganization, and evaluation comprehension.

Based on the conclusions drawn from the study, the following were recommended:

1. Through the finding of this study, teachers can integrate Animated Clips into teaching to engagingly



supplement the traditional method of teaching addressing specific learning objectives and cater to the diverse needs of students.

2. The findings of the study encourage reflection and discussion on the emotional themes presented in the animated clips. Encourage open discussion in the classroom where students can share their thoughts, experiences, and interpretations of the emotions depicted, integrating Values Education or use the emotional content of the animated clips as a springboard for discussions on empathy and understanding. This promotes critical thinking and deeper engagement with the content.
3. The findings of the study encourage to create an opportunity to extend the continual learning of the students by giving seminars about Animated Clips to the teachers in key areas which would help the students to learn independently.

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PANITIKLOSAN: BILANG KASANGKAPAN NG LOKAL AT KONTEKSTWALISADONG PAGKATUTO NG AKADEMIKONG SULATIN SA PAGGANAP NG MGA MAG-AARAL

Ruffa Mae Obis Navarro

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRAK

Nilayon ng pananaliksik na ito na malaman ang epekto ng PanitikLoSan bilang kasangkapan sa pagkatuto ng lokal at kontekstwalisado sa akademikong sulatin sa pagganap ng mga mag-aaral. Naisakatuparan ito sa pagtugon sa mga sumusunod na katanungan: 1. Ano ang kakayahan ng PanitikLoSan bilang Kasangkapan batay sa Layunin, Nilalaman, Gawain, Pagtataya, Katangian ng Materyal sa Disenyo at Teknikal na Pormat; 2. Ano ang kakayahan ng akademikong sulatin ng mga mag-aaral batay sa Tema, Kaisahan at Mekaniks; 3. Ano ang antas ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat; 4. May makabuluhang epekto ba ang PanitikLoSan: Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga mag-aaral; at 5. May makabuluhang epekto ba ang antas ng akademikong sulatin sa pagganap ng mga mag-aaral?

Ginamit sa pag-aaral ang palarawang pananaliksik at Purposive Sampling Technique upang makuha at mataya ang kaukulang resulta ng pananaliksik. Ang nagsilbing tagatugon ay ang isandaan at tatlumpu't tatlo (133) na mag-aaral sa San Pedro Relocation Center National High School sa pagtanggap ng binuong materyal bilang pantulong sa pagkatuto sa mga paksa. Ang mananaliksik ay gumamit ng talatanungan bilang materyal at nagbigay ng pagtataya batay sa lohikal na pagsulat upang matugunan ang nasabing pananaliksik.

Batay sa mga naanalisa ng datos, ang antas ng paggamit ng PanitikLoSan bilang kasangkapan sa pagkatuto ng lokal at kontekstwalisado sa Filipino batay sa layunin, nilalaman, gawain, pagtataya, at katangian ng materyal alinsunod sa disenyo at teknikal na pormat ay may kaakibat na interpretasyong Lubhang Mataas, gayundin ang antas ng pagsulat ng akademikong sulatin ng mga mag-aaral. Samantala ang resulta ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat may mapaglarawang katumbas na Pinakamahusay at may literal na paliwanag na Napakakasiya-siya. Sa kabila nito ay "Walang makabuluhang epekto sa PanitikLoSan: Bilang Kasangkapan sa Pagkatuto ng Lokal at Kontekstwalisado sa pagganap ng mga mag-aaral" at "Walang makabuluhang epekto sa akademikong sulatin sa pagganap ng mga mag-aaral". Samakatuwid, sa pamamagitan ng pagsusuri ng mga datos at resulta ng pananaliksik, napagtanto na ang PanitikLoSan ay maaaring hindi ang pinakamabisang kasangkapan sa pagtuturo ng akademikong sulatin.

Sa mga natuklasan at konklusyon ng nabuo, ang mga rekomendasyon na ay naglalayon ng mga sumusunod: ang mga guro at dalubguro sa Filipino ay maaaring gumamit ng iba't ibang kasangkapan at materyales sa pagtuturo ng akademikong sulatin na hindi umaasa sa PanitikLoSan at magpatuloy sa paghihikayat sa mga mag-aaral sa pagpapabuti sa kanilang mga kasanayan sa pagsulat ng akademikong; ang punong-guro ng paaralan ay ipagpatuloy ang suporta sa mga guro at dalubguro na mag-organisa ng mga pagsasanay, seminar, worksyap o SLAC na magpapaunlad sa pagtuturo ng akademikong sulatin; at ang mga mananaliksik sa hinaharap ay maaaring ituloy ang pagsasagawa ng mas malalim na pananaliksik upang suriin ang iba't ibang aspeto sa pagkatuto ng akademikong sulatin.

SUSING SALITA: Kontekstwalisadong Pagkatuto; Akademikong Sulatin;Pagganap

1. PANIMULA

Ang asignaturang Filipino ay nakatuon sa pagtuturo ng Wika at Panitikan. Nililina nito ang kasanayan sa pakikinig, pagsasalita, pagbabasa, pagsusulat at panood. Binibigyang pansin nito ang lahat ng bagay na maaaring mapag-usapan, maisulat, maisip, makita at madama.

Gayunpaman, napapansin na ang mga mag-aaral sa panahon ngayon ay hindi gaanong nagpapakita masteri sa mga kompetensi hinggil sa mga aralin. hindi makapagpahayag ang mga mag-aaral sa isang makabuluhang pangungusap, higit lalo kapag tinatanong ang mga ito ng kung anong bahagi ng pangungusap ang kanilang ginamit o kaya naman ang paggamit ng mga bantas at pagbuo ng isang maayos at organisadong sulatin.

Kaya naman sa pananaliksik ni Abad (2019) lumabas ang mga mag-aaral na tagatugon ay nahihirapang bumuo ng pangungusap na nangangahulugang hindi bihasa ang mga mag-aaral sa paggamit ng tamang wika at hindi alam ang istruktura sa pagbuo ng pangungusap.

Malaking ambag ang lektur ni Buenavista (2016), napatunayang sa kontekstuwalisasyon at lokalisasyon, gumagamit ang guro ng mga awtentikong kagamitan, gawain, interes, isyu at pangangailangan mula sa buhay ng mga mag-aaral. Kahalintulad ito ng pahayag ng isang mag-aaral na si Godda sa panayam ni Buenavista (2016) na kayang matanggap ng mga-aaral ang kaalaman kung ito ay kanilang mararanasan tulad ng lakbay-aral, pangkatang proyekto, demonstrasyon at iba pa. Sa madaling sabi, ang kagamitang – panturo ay lubos na



kailangan sa pag-aaral bilang gabay ng mga guro sa pagtuturo na sadyang mahalaga. Kaya sa kagustuhang mapaunlad pa ang mga istrategiya sa pagtuturo, ang mga Komisyon sa Lalong Mataas na Edukasyon ay nagsasagawa ng mga inisasyon at pamamaraan upang lalong maging epektibo ang pagkatuto para sa episyente at kapaki-pakinabang na pagtuturo (Sims at Sims, 1995 sa pagbanggit ni York, 2013)

Sinabi pa ni Mapa (2014), mananatiling pinakamahalagang bahagi ng pagtuturo at pag-aaral ang pagkatuto. Lumalabas na ang pagkatuto ay nakabatay sa kung paano at anong paraan ang gagamitin ng mga guro sa pagtuturo. Ang mga pamamaraang gagamitin ng mga guro ay nakabatay din sa ninanais niyang resulta na makamit ng mga mag-aaral at maging sa paksa ng kanyang araling kanyang ituturo. Sa pag-aaral na ito, nakitaan nang hindi sapat na kagamitan panlunas sa pagtuturo kung kaya't ito ang ginamit ng mananaliksik na suliraning binigyang-solusyon at makabuo ng isang makabuluhang kagamitang pampagtuturo na makatutulong sa mga mag-aaral. At ninais din ng mananaliksik na mamulat ang mga mag-aaral iba't ibang literatura at gawi ng bayang kanilang kinabibilangan.

1.1 Paglalahad ng Suliranin

Maisasakatuparan ito sa pagtugon sa mga sumusunod na katanungan:

1. Ano ang kakayahan ng PanitikLoSan bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa:
 - 1.1 Layunin;
 - 1.2 Nilalaman;
 - 1.3 Gawain;
 - 1.4 Pagtataya;
 - 1.5 Katangian ng Materyal sa Disenyo; at
 - 1.6 Katangian ng Materyal sa Teknikal na Pormat?
2. Ano ang kakayahan ng akademikong sulatin ng mga mag-aaral batay sa:
 - 2.1 Tema;
 - 2.2 Kaisahan; at
 - 2.3 Mekaniks?
3. Ano ang antas ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat?
4. May makabuluhang epekto ba ang PanitikLoSan: Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga mag-aaral?
5. May makabuluhang epekto ba ang antas ng akademikong sulatin sa pagganap ng mga mag-aaral?
6. Anong planong gawain ang nais imungkahi matapos ang pag-aanalisa ng pag-aaral?

Talahanayan 1 Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Layunin

Mga Pahayag	Mean	SD	Puna
<i>Nauunawaan ang mga salitang ginamit sa layunin.</i>	4.78	0.45	Lubos na sumasang-ayon
<i>Naglalahad ng tiyak at makatotohanan na layunin.</i>	4.82	0.41	Lubos na sumasang-ayon
<i>Nagpapatid ng resulta o kahihinatnan matapos ang talakayan.</i>	4.74	0.45	Lubos na sumasang-ayon
<i>Naiisa-isa ang layunin.</i>	4.75	0.45	Lubos na sumasang-ayon
<i>Nagpapakita ng kahalagahan ng layunin bago at matapos ang paksaang tinalakay.</i>	4.90	0.32	Lubos na sumasang-ayon

2. METODOLOHIYA NG PANANALIKSIK

Ang disenyong ginamit ng mananaliksik sa pag-aaral na ito ay deskriptibong paraan. Ang palarawang pananaliksik ay mga kaganapan sa pag-aaral ay kinapapalooban ng pagtatala, paglalarawan, pagpapakahulugan, pagsusuri at paghahambing. Layunin ng ganitong disenyo na sistematikong mailarawan ang sitwasyon at kundisyon nang makatotohanan at buong katiyakan. Naniniwala ang mananaliksik na makatutulong ang disenyong ito upang makuha ang sapat datos sa kanyang pag-aaral.

3. PRESENTASYON, ANALISIS, AT INTERPRETASYON

Ang kabanatang ito ay tumatalakay sa presentasyon, analisis at interpretasyong pagpapakahulugan sa pamamagitan ng mga talahanayan upang mabigyang kasagutan ang mga inilahad na suliranin sa pag-aaral na ito. Ang bawat impormasyong nakuha ay inilahad nang maayos sa mga talahanayan.

Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto

Ang antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto ay sinukat batay sa layunin, nilalaman, gawain, at pagtataya, gayundin ang katangian ng materyal alinsunod sa disenyo, at teknikal na pormat.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Pahayag, Mean, Standard Deviation at Puna upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Sa Talahanayang 1 ay nagpakita ng antas na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas sa paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Layunin.

Natuklasan na ang *pagtatakda ng layunin bago at matapos ang talakayan* ay napakahalaga, na may markang ($M=4.90$, $SD=0.32$). Ang *pagtatakda ng tiyak at makatotohanang layunin* ay nakatanggap din ng mataas na marka, ($M=4.82$, $SD=0.41$), na nagpapahiwatig na ang pagkakaroon ng konkreto at naaabot na layunin ay kritikal sa pagtuturo at pagkatuto. Bagaman mataas ang pangkalahatang paggamit ng PanitikLoSan, ang pinakamababang marka ay napunta sa pahayag na *nagpapatid ng resulta o kahihinatnan matapos ang talakayan*, na may ($M=4.74$, $SD=0.45$).



Overall Mean: 4.80

Standard Deviation: 0.26

Literal na paliwanag: Lubhang Mataas

Ipinapakita na ang antas ng paggamit ng PanitikLoSan bilang Kasangkapan sa Pagkatuto ng Lokal at Kontekstwalisado batay sa Layunin na may kabuoang mean na 4.80, standard deviation na 0.26 at may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Samakatuwid, batay sa resulta ng talahanayan ay ipinapakita nito na ang malinaw na mga layunin ay mahalaga para sa

epektibong pagkatuto. Ipinapakita nito na bagamat epektibo, mayroong puwang para sa pagpapabuti sa aspeto ng pagbibigay-diin sa mga inaasahang resulta o kahihinatnan ng talakayan.

Nagpapakita ang Talahanayan 2 ng Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Nilalaman.

Talahanayan 2 Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Nilalaman

Mga Pahayag	Mean	SD	Puna
<i>Nagsasaad ng obhetibo at katotohanan ang nilalaman.</i>	4.91	0.31	Lubos na sumasang-ayon
<i>Nakabatay sa kurikulum ng kagawaran ng edukasyon.</i>	4.89	0.34	Lubos na sumasang-ayon
<i>Naglalaman ng lokal na impormasyon at kagamitan mula sa komunidad ng mag-aaral</i>	4.86	0.36	Lubos na sumasang-ayon
<i>Naipakita sa mungkahing modyul ang mga mahalagang aspeto na dapat matutunan.</i>	4.72	0.47	Lubos na sumasang-ayon
<i>Nakakuha ng atensyon ang nilalaman ng modyul.</i>	4.53	0.58	Lubos na sumasang-ayon

Overall Mean: 4.78

Standard Deviation: 0.24

Literal na paliwanag: Lubhang Mataas

Nangangahulugang na walang kinikilingan at batay sa katotohanan ay lubos na pinahahalagahan dito, ito ay ipinapakita sa resulta na may pahayag na *nagsasaad ng obhetibo at katotohanan* dahil ito ay nakakuha ng ($M=4.91$, $SD=0.31$). Samantala, ang mga pahayag na sumusunod sa *kurikulum ng Kagawaran ng Edukasyon* ay may markang ($M=4.89$, $SD=0.34$), na nagpapakita ng kaunting pagkakaiba lamang at nagpapahiwatig ng halos katulad na antas ng pagpapahalaga.

Ang nakatanggap naman ng ($M=4.86$, $SD=0.36$) na pahayag ay ipinapakita nito na mahalaga rin ang pag-aangkop ng mga materyales sa lokal na konteksto upang maging mas relatable at kapaki-pakinabang ang mga ito para sa mga mag-aaral.

Sa kabilang banda, ang mga pahayag sa mungkahing modyul na nagtatampok ng mga *maalagang aspeto na dapat matutunan* ay may mas mababang marka na ($M=4.2$, $SD=0.47$). Kapansin-pansin ang pahayag na *ang nilalaman ng*

modyul ay nakakaakit ng atensyon, na may markang ($M=4.53$, $SD=0.58$). Maaaring ipahiwatig nito na bagama't mahalaga ang nilalaman, maaaring kulang ito sa iba pang aspeto tulad ng presentasyon.

Sa kabuoang mean na 4.78, standard deviation na 0.24 at ipinapakita na ang antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Nilalaman ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Samakatuwid, ipinapakita nito na ang pagkakaroon ng mga elemento na nakakahatak ng atensyon ay mahalaga rin para sa mga mag-aaral upang mas maging interesado at masigasig sa pag-aaral.

Ang Talahanayan 3 naman ay nagpapakita ng antas na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas sa PanTikLoSan batay sa Gawain.

Talahanayan 3 Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Gawain

Mga Pahayag	Mean	SD	Puna
<i>Nakaangkop ang gawain sa paksang tinatalakay.</i>	4.81	0.46	Lubos na sumasang-ayon
<i>Nagbibigay ng gawain matapos ang pagtalakay.</i>	4.67	0.53	Lubos na sumasang-ayon
<i>Naglalahad ng mga panuto o intruksiyon sa gawain.</i>	4.94	0.24	Lubos na sumasang-ayon
<i>Naglalaan ng sapat na oras sa pagsasagawa ng gawain.</i>	4.83	0.39	Lubos na sumasang-ayon
<i>Nagbabahagi ng gawain batay sa interes.</i>	4.54	0.56	Lubos na sumasang-ayon

Overall Mean: 4.76

Standard Deviation: 0.27

Literal na paliwanag: Lubhang Mataas



Batay sa mga gawain at pananaw ng mga tagatugon, lumalabas na ang mga gawain ay akma sa paksang tinalakay, na nakakuha ng markang ($M=4.81$, $SD=0.46$). Ipinapakita nito na epektibong naiayon ang mga gawain sa mga paksang pinag-aaralan.

Ang pagbibigay ng gawain matapos ang talakayan ay nakatanggap ng markang ($M=4.67$, $SD=0.53$), na nagpapahiwatig na ang pag-follow up ng mga gawain pagkatapos ng talakayan ay mahalaga para sa pagkatuto. Ang pahayag na *naglalahad ng mga panuto o instruksiyon sa gawain* ay may pinakamataas na marka na ($M=4.94$, $SD=0.24$), na nagpapakita na ang malinaw na mga panuto ay kritikal para sa pag-unawa at tamang pagsasagawa ng mga gawain. Ang resultang ($M=4.83$, $SD=0.39$), na nagpapahiwatig na ang paglalaan ng sapat na oras ay mahalaga para sa matagumpay na pagkatuto. Bagaman mataas ang antas ng paggamit ng PanitikLoSan, ang pahayag na may pinakamababang marka ay ang *nagbabahagi ng gawain batay sa interes ng mga mag-*

aaral, na may ($M=4.54$, $SD=0.56$). Ipinapakita nito na may puwang pa para sa pagpapabuti sa aspeto ng pag-aangkop ng mga gawain. May kabuoang mean na 4.76, at standard deviation na 0.27 ay ipinapakita na ang antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa gawain ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Samakatuwid, ang resultang ito ay nagpapakita na ang paggamit ng PanitikLoSan na batay sa gawain ay may malinaw na panuto at instruksiyon na ngunit kailangan pang maiangkop batay sa interes ng mga mag-aaral ang gawan upang mas mapataas ang kanilang motibasyon at pagkakasangkot dito.

Ang Talahanayan 4 naman ay nagsasaad ng Antas ng paggamit ng PantikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Pagtataya.

Talahanayan 4 Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Pagtataya

Mga Pahayag	Mean	SD	Puna
Akma sa mga mag-aaral sa baitang 11 ang ibinigay na pagtataya.	4.86	0.33	Lubos na sumasang-ayon
Sapat ang bilang ng pagtataya upang maunawaan ang aralin.	4.69	0.51	Lubos na sumasang-ayon
Sumusubok sa kahusayan sa pagsulat ng akademikong sulatin.	4.73	0.46	Lubos na sumasang-ayon
Nagbibigay ng pamantayan ng pagpupuntos.	4.89	0.35	Lubos na sumasang-ayon
Nasusukat ang kaalaman ng mga mag-aaral gamit ang kritikal na mga katanungan	4.71	0.53	Lubos na sumasang-ayon

Overall Mean: 4.78

Standard Deviation: 0.27

Literal na paliwanag: Lubhang Mataas

Nagpapakita ang talahanayang ito na may puna na *lubos na sumasang-ayon* at literal na paliwanag na *lubhang mataas* sa PanitikLoSan batay sa Pagtataya. Ang pahayag na *nagbibigay ng pamantayan ng pagpupuntos* ay nakakuha ng ($M=4.89$, $SD=0.35$), at sa pahayag na *angkop ang pagtataya para sa mga mag-aaral sa baitang 11* ay mayroong ($M=4.86$, $SD=0.33$), na nagpapakita na angkop at epektibo ang mga pagtataya para sa partikular na antas ng mga mag-aaral.

Samantala, ang *sumusukat sa kahusayan sa pagsulat ng akademikong sulatin* ay nakatanggap ng ($M=4.73$, $SD=0.46$), na nagpapakita na ang pagtataya sa pagsusulat ay mahalaga, ngunit may puwang pa para sa pagpapabuti. Sa may pinakamababang marka na ($M=4.69$, $SD=0.51$), ang pahayag na *sapat ang bilang ng pagtataya upang maunawaan ang aralin*. Ito ay may kabuoang mean na 4.78, standard deviation na 0.27.

Sa pangkalahatan, ang paggamit ng PanitikLoSan bilang kasangkapan ng lokal at kontekstwalisadong pagkatuto batay sa Pagtataya, ito ay na nagpapahiwatig na ang malinaw na

pamantayan sa pagpupuntos ay lubos na pinahahalagahan at na maaaring kailangan pa ng karagdagang mga pagtataya o mas maayos na distribusyon ng mga ito upang masiguro ang mas malalim na pag-unawa ng mga mag-aaral sa aralin

Ang Talahanayan 5 ay nagsasaad ng Antas ng paggamit ng PanTikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Katangian ng Materyal sa Disenyo.

Ang pahayag na nagsasabing *nagagamit ang mga larawang natatangi sa lungsod ng San Pedro* ay may markang ($M=4.95$, $SD=0.21$). Ang parehong pahayag na *nagsasaad na angkop ang mga larawang napili sa loob at labas ng materyal*, at ang pahayag na *napauunlad ang kabatiran sa aralin sa kabuuan ng disenyo*, ay parehong nakakuha ng markang ($M=4.79$, $SD=0.41$). Ipinapakita nito na ang pagpili ng mga tamang larawan at ang pangkalahatang disenyo ng materyal ay mahalaga sa pagpapabuti ng pagkatuto.



Talananayan 5 Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Katangian ng Materyal sa Disenyo

Mga Pahayag	Mean	SD	Puna
Angkop na mga larawan na napili sa loob at labas ng materyal.	4.79	0.41	Lubos na sumasang-ayon
Nakahihikayat ang kulay na ginamit sa nilalaman ng materyal.	4.74	0.45	Lubos na sumasang-ayon
Nagbibigay interes ang istilong na ginamit sa materyal.	4.76	0.46	Lubos na sumasang-ayon
Nagagamit ang mga larawang natatangi sa lungsod ng San Pedro.	4.95	0.21	Lubos na sumasang-ayon
Napauunlad ang kabatiran sa aralin ng kabuuan ng disenyo.	4.79	0.41	Lubos na sumasang-ayon

Overall Mean: 4.81

Standard Deviation: 0.26

Literal na paliwanag: Lubhang Mataas

Bagaman may mataas na antas sa paggamit ng mga materyal na ito, ang pahayag na may pinakamababang marka ay nagsasaad na nakahihikayat ang kulay na ginamit sa nilalaman ng materyal, na may markang ($M=4.74$, $SD=0.45$), marahil ito ay hindi ganoon kapektibo. Nakakuha ng kabuoang mean na 4.81 at standard deviation na 0.26 ang paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Katangian ng materyal sa Disenyo.

Batay sa datos na nakalap, ang paggamit ng PanitikLoSan batay sa katangian ng materyal sa disenyo ay nagpapakita na ang paggamit ng mga lokal na larawan ay lubos na epektibo at pinahalalagan. Bagamat epektibo ang kulay na ginamit, ito ang aspeto na may pinakamababang epekto kumpara sa iba pang mga elemento ng disenyo.

Ang Talananayan 6 ay nagsasaad ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Katangian ng materyal sa Teknikal na pormat.

Talananayan 6 Antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Katangian ng Materyal sa Teknikal na pormat

Mga Pahayag	Mean	SD	Puna
Simple at nauunawaan ang mga salitang ginamit.	4.65	0.55	Lubos na sumasang-ayon
Tama ang pagbabaybay ng salita at wasto ang gramatika ng mga pangungusap.	4.89	0.32	Lubos na sumasang-ayon
Pagbanggit ng mga pinaghanguan ng ideya, larawan, at impormasyon.	4.83	0.41	Lubos na sumasang-ayon
Mayroong kaayusan ng pormat sa bawat bahagi.	4.83	0.40	Lubos na sumasang-ayon
Nagtataglay ng wastong bilang ang mga pahina at pagkakahanay ng bawat talata.	4.80	0.45	Lubos na sumasang-ayon

Overall Mean: 4.80

Standard Deviation: 0.28

Literal na paliwanag: Lubhang Mataas

Sa pananaw ng mga tagatugon, ang tama ang pagbabaybay ng salita at wasto ang gramatika ng mga pangungusap ay nakakuha ng ($M=4.89$, $SD=0.32$). Ibig sabihin nito na ang wastong paggamit ng wika sa PanitikLoSan ay lubos na pinahalalagan at epektibo sa pagtuturo. Bagaman mataas ang antas ng paggamit ng PanitikLoSan, ang pahayag na may pinakamababang marka ay ang simple at nauunawaan ang mga salitang ginamit, na may ($M=4.65$, $SD=0.55$).

Ipinapakita nito na bagamat epektibo ang paggamit ng tamang pagbabaybay at gramatika, mayroon pa ring puwang para mapabuti ang pagiging simple at pagkaunawa ng mga salitang ginamit sa materyal. Ito ay may kabuoang mean na 4.80, standard deviation na 0.28 at ipinapakita na ang antas ng paggamit ng PanitikLoSan Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto batay sa Katangian ng Materyal sa Teknikal na pormat ay may puna na lubos na sumasang-ayon

at literal na paliwanag na lubhang mataas.

Samakatuwid, ipinapakita ng mga resulta na ang tamang paggamit ng wika ay mahalaga sa epektibong pagkatuto, ngunit kailangang bigyang-pansin ang paggamit ng mas simpleng wika upang mas madaling maintindihan ng mga mag-aaral.

Antas ng Akademikong Sulatin ng mga Mag-aaral

Ilalahad sa bahaging ito ang antas ng pagsulat ng akademikong sulatin ng mga mag-aaral na sinukat batay sa Tema, Kaisahan, at Mekaniks.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talananayan ang mga Pahayag, Mean, Standard Deviation at Puna upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.



Ang talahanayan 7 ay nagpapakita ng Antas ng akademikong sulatin ng mga mag-aaral batay sa Tema.

Talahanayan 7 Antas ng akademikong sulatin ng mga mag-aaral batay sa Tema

Mga Pahayag	Mean	SD	Puna
Nagpapahalaga sa panitikang lokal at gawi ng lungsod ng San Pedro.	4.92	0.26	Lubos na sumasang-ayon
Nagbabaliktanaw sa kultura, tradisyon, at paniniwala ng mga mamamayan ng San Pedro.	4.85	0.42	Lubos na sumasang-ayon
Nag-uugnay ng sarili, sa bayan, at daigdig sa akademikong sulatin ang tema.	4.80	0.44	Lubos na sumasang-ayon
Nagbibigay importansya sa pangkalahatang nilalaman ng akdang isinusulat.	4.86	0.35	Lubos na sumasang-ayon
Nagpapakita ng pagtangkilik sa panitikang lokal at gawi kasabay ng pagkatuto sa pagsulat ng akademikong aralin.	4.89	0.32	Lubos na sumasang-ayon

Overall Mean: 4.86

Standard Deviation: 0.22

Literal na paliwanag: Lubhang Mataas

Ang nagpapahalaga sa panitikang lokal at gawi ng lungsod ng San Pedro ay nakakuha ng ($M=4.92, SD=0.26$), na nagpapahiwatig na ang paggamit ng lokal na panitikan at kaugalian ay mahalaga para sa mga mag-aaral. Ang pahayag na nagpapakita ng pagtangkilik sa panitikang lokal at gawi kasabay ng pagkatuto sa pagsulat ng akademikong aralin ay mayroong ($M=4.89, SD=0.32$). Inilalahad nito na ang pagsasama ng lokal na konteksto sa pagtuturo ng akademikong pagsulat ay epektibo at pinahahalagahan ng mga mag-aaral. Ngunit mataas man ang antas ng akademikong sulatin, ang pahayag na may pinakamababang marka ay ang nag-uugnay ng sarili, sa bayan, at daigdig sa akademikong sulatin ang tema, na may ($M=4.80, SD=0.44$). Ibig sabihin nito na may puwang pa para mapabuti ang aspeto ng pag-uugnay ng personal na

karanasan, lokal na konteksto, at global na pananaw sa pagsulat ng akademikong sulatin.

Ito ay may kabuoang mean na 4.86, standard deviation na 0.22 at ipinapakita na ang antas ng akademikong sulatin ng mga mag-aaral batay sa Tema ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa kabuuan, ipinapakita ng mga resulta na ang pagsasama ng lokal na panitikan at kaugalian sa akademikong pagsulat ay epektibo, ngunit kailangan pang pagtuunan ng pansin ang pag-uugnay ng mga mag-aaral ng kanilang sarili, komunidad, at mas malawak na mundo sa kanilang mga akademikong sulatin upang mas mapalalim ang kanilang pagkatuto.

Talahanayan 8 Antas ng akademikong sulatin ng mga mag-aaral batay sa Kaisahan

Mga Pahayag	Mean	SD	Puna
Organisado ang pagtatalakay sa mga aralin.	4.86	0.39	Lubos na sumasang-ayon
Madaling masundan ang buong modyul dahil sa pagkakaayos nito.	4.92	0.30	Lubos na sumasang-ayon
Nagbibigay diin o emphasis sa akademikong sulatin.	4.68	0.56	Lubos na sumasang-ayon
May wastong pagkakabuo o pagkakasunod-sunod ng mga ideya sa loob ng akademikong paksa.	4.80	0.43	Lubos na sumasang-ayon
Organisado ang pagtatalakay sa mga aralin.	4.88	0.37	Lubos na sumasang-ayon

Overall Mean: 4.83

Standard Deviation: 0.27

Literal na paliwanag: Lubhang Mataas

Ang talahanayan 8 ay nagpapakita ng Antas ng akademikong sulatin ng mga mag-aaral batay sa Kaisahan.

Sa pananaw ng mga tagatugon, madaling masundan ang buong modyul dahil sa maayos nitong pagkakaayos, na nakakuha ng ($M=4.92, SD=0.30$). Ipinapakita nito na ang pagkakaroon ng maayos na balangkas at pagkakasunod-sunod ng mga paksa ay mahalaga sa pag-unawa ng mga mag-aaral sa modyul. Samantala, ang pahayag na may pinakamababang marka ay ang nagbibigay diin o emphasis sa akademikong sulatin, na may ($M=4.68, SD=0.56$).

Ipinapakita nito na bagamat epektibo ang modyul sa pangkalahatan, mayroon pa ring aspeto na kailangang pagtuunan ng pansin, tulad ng pagbibigay-diin sa mga mahahalagang bahagi ng akademikong sulatin. Ito ay may kabuoang mean na 4.83, standard deviation na 0.27 at ipinapakita na ang antas ng akademikong sulatin ng mga mag-aaral batay sa Kaisahan ay may puna na lubos na sumasang-ayon at literal na paliwanag na lubhang mataas.

Sa kabuuan, ipinapakita ng mga resulta na ang maayos na pagkakaayos ng modyul ay mahalaga para sa mabuting pag-unawa ng mga mag-aaral, ngunit kailangang bigyang-pansin



ang pagbibigay-diin sa mga pangunahing konsepto o bahagi ng akademikong sulatin upang mas mapalalim ang kanilang pagkatuto.

Ang Talahanayan 9 naman ay nagsasaad ng antas ng akademikong sulatin ng mga mag-aaral batay sa Mekaniks.

Talahanayan 9 Antas ng akademikong sulatin ng mga mag-aaral batay sa Mekaniks

Mga Pahayag	Mean	SD	Puna
Mayroong sinusunod na panuntunan sa pagsulat ng akademikong paksa.	4.90	0.30	Lubos na sumasang-ayon
Nagbibigay ng malinaw na alintuntunin sa pagbuo ng akademikong sulatin.	4.86	0.35	Lubos na sumasang-ayon
Nakapipili ng angkop na tuntunin sa sulatin.	4.71	0.50	Lubos na sumasang-ayon
Angkop ang mekaniks sa mga gawaing ibinigay.	4.78	0.43	Lubos na sumasang-ayon
Target na malinang ang kaalaman at kahusayan sa mekaniks.	4.89	0.31	Lubos na sumasang-ayon

Overall Mean: 4.83

Standard Deviation: 0.25

Literal na paliwanag: Lubhang Mataas

Sa mataas na antas ng akademikong sulatin ng mga mag-aaral batay sa Mekaniks, lumalabas sa pananaw ng mga tagatugon na may sinusunod na panuntunan sa pagsulat ng akademikong paksa, na nakakuha ng ($M=4.90, SD=0.30$). Ipinapakita nito na mahalaga ang pagkakaroon ng mga tuntunin o gabay sa pagsulat upang maging maayos at epektibo ang pagpapahayag ng mga ideya sa akademikong sulatin. Ang *target na malinang ang kaalaman at kahusayan sa mekaniks* ay mayroong ($M=4.89, SD=0.31$), na nagpapahiwatig na ang pagtutok sa pagpapalalim ng kaalaman at kasanayan sa mekaniks ay mahalaga sa pagkatuto ng mga mag-aaral sa larangang ito. Ngunit, ang pahayag na may pinakamababang marka ay ang *nakapipili ng angkop na tuntunin sa sulatin*, na may ($M=4.71, SD=0.50$). Ipinaliliwanag nito na may puwang pa para sa pagpapabuti sa aspeto ng pagpili ng tamang tuntunin o panuntunan sa pagsulat.

Ang talahanayan ay may kabuoang mean na 4.83 at standard deviation na 0.25, na nagpapakita na ang antas ng akademikong sulatin ng mga mag-aaral batay sa Mekaniks ay may puna na *lubos na sumasang-ayon* at literal na paliwanag na *lubhang mataas*. Ito ay nagpapahiwatig ng mataas na kalidad ng pagsulat ng mga mag-aaral sa nasabing larangan.

Samakatuwid, ipinapakita ng mga resulta na ang akademikong sulatin ng mga mag-aaral batay sa Mekaniks ay may maayos na

pagkakaayos ng modyul ay mahalaga para sa mabuting pag-unawa ng mga mag-aaral, ngunit kailangang bigyang-pansin ang pagbibigay-diin sa mga pangunahing konsepto o bahagi ng akademikong sulatin upang mas mapalalim ang kanilang pagkatuto.

Pagganap ng mga Mag-aaral

Ang pag-aaral na ito ay naglalaman ng resulta ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat.

Sa pagkuha ng resulta, makikita sa mga sumusunod na talahanayan ang mga Marka, Frequency, Percentage, at ang Mapaglarawang Katumbas, gayundin ang Berbal na Interpretasyon nito sa ibaba upang higit na mailarawan ang kinalabasan ng pag-aaral na ito.

Talahanayan bilang sampu ay nagpapakita ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat, sa kabuoang isang daan at tatlumput-tatlo na tagatugon, ang marka na "26 - 30" ay nakakuha ng pinakamataas na bilang na isang daan at anim (106) o 79.70% ng kabuoang tumugon at may mapaglarawang katumbas na *Pinakamahusay*. At ang marka na "21 - 25" ay mayroong bilang na dalawampu at anim (26) o 19.55% ng kabuoang tumugon at may mapaglarawang katumbas na *Higit na mahusay*. Habang ang marka na "16 - 20" ay nakakuha ng pinakamababang bilang na isa (1) o 0.75% ng kabuoang tumugon at may mapaglarawang katumbas na *Mahusay*.

Talahanayan 10 Resulta ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat

Marka	Frequency	Percentage	Mapaglarawang Katumbas
26 - 30	106	79.70	Pinakamahusay
21 - 25	26	19.55	Higit na Mahusay
16 - 20	1	0.75	Mahusay
11 - 15	0	0.00	Di-gaanong Mahusay
6 - 10	0	0.00	Di mahusay
0 - 5	0	0.00	Lubhang Di mahusay
Total	133	100	
Weighted Mean		26.99	
Pinakamababang Marka		18	
Pinakamataas na marka		30	<i>Napakakasiya-siya</i>
Standard Deviation		2.34	



May kabuoang (*Weighted Mean = 26.99, SD = 2.34*) at (*pinakamababang marka = 18, pinakamataas na marka = 30*) ipinapakita na ang resulta ng pagganap ng mga mag-aaral batay sa lohikal na pagsulat ay may mapaglarawang katumbas na *Pinakamahusay* at may literal na paliwanag na *Napakakasiya-siya*.

Samakatuwid, ang mga datos ay nagpapahiwatig na ang karamihan sa mga mag-aaral ay mahusay sa lohikal na pagsulat, na may kaunting pagkakaiba-iba sa kanilang mga marka. Ipinapakita nito na ang lohikal na pagsulat ay isang larangan kung saan sila ay nakikitaan ng mataas na kasanayan at kakayahan.

Makabuluhang epekto ng PaniTikLoSan: Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga Mag-aaral

Ipinakikita sa Talahanayan 11 na ang resultang ito ay walang positibong epekto ang PaniTikLoSan bilang kasangkapan ng lokal at kontekstwalisadong pagkatuto sa pagganap ng mga

Talahanayan 11 Makabuluhang epekto ng PanitikLoSan: Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga Mag-aaral

Pagganap	B	SE	β	t	p
Constant	26.00	4.951		5.252*	.000
Layunin		1.183	-.129	-.109	.913
Nilalaman		1.155	-.299	-.259	.796
Gawain		1.092	1.523	1.394	.166
Pagtataya		1.124	.682	.607	.545
Disenyo ng Materyal		1.07	-.875	-.818	.415
Tekninal na pormat ng Materyal		1.047	-.679	-.649	.518
R-squared			.029		
Adjusted R-squared			-.017		
Standard Error of the Estimate		2.363			
F(5, 180)				.632	.705

*p < 0.05

Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto sa pagganap ng mga mag-aaral at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “Walang makabuluhang epekto sa PanitikLoSan: Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga mag-aaral” ay tanggapin, ipinapakita nito na walang epekto sa pagitan nila.

Samakatuwid, nagpapakita na ang PanitikLoSan bilang kasangkapan ng lokal at kontekstwalisadong pagkatuto, ay walang makabuluhang epekto sa pagganap ng mga mag-aaral.

Talahanayan 12 Makabuluhang epekto ng akademikong sulatin sa pagganap ng mga Mag-aaral

Pagganap	B	SE	β	t	p
Constant	25.61	4.964		5.158*	.000
Tema		1.146	-.161	-.14	.889
Kaisahan		1.001	.46	.46	.646
Mekaniks		1.113	-.011	-.01	.992
R-squared			.002		
Adjusted R-squared			-.021		
Standard Error of the Estimate		2.368			
F(5, 180)				.095	.963

*p < 0.05

mag-aaral.

Sa pagkuha ng resulta makikita sa talahanayang ito ay tinuos sa pamamagitan ng Beta, Standard Error, Beta Coefficient, T-Value, at P-Value.

Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto sa PanitikLoSan: Bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga mag-aaral. Ang *regression model* ay nagpapaliwanag ng 2.9% ng *variance* sa pagganap ng mga mag-aaral (R-squared = 0.029). Ang *Layunin, Nilalaman, Gawain, Pagtataya, Disenyo ng Materyal at Tekninal na pormat ng Materyal* ay walang positibong epekto sa pagganap ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan (F (6, 126) p > 0.05), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Ipinapakita nito na ang mga variable na sinuri ay hindi nakatulong sa pagpapaliwanag ng pagbabago sa pagganap ng mga mag-aaral, na nangangailangan ng karagdagang pagsusuri at posibleng pagbabago sa metodolohiya o variable na isinama sa pag-aaral.

Makabuluhang epekto ng Akademikong Sulatin sa Pagganap ng mga Mag-aaral

Sa pagkuha ng resulta makikita sa talahanayang ito ay tinuos sa pamamagitan ng Beta, Standard Error, Beta Coefficient, T-Value, at P-Value.



Ipinapakita ng talahanayan ang resulta ng *multiple regression analysis* sa pagsusuri ng epekto sa akademikong sulatin sa pagganap ng mga mag-aaral. Ang *regression model* ay nagpapaliwanag ng 0.2% ng *variance* sa pagganap ng mga mag-aaral ($R\text{-squared} = 0.002$). Ang *Tema*, *Kaisahan* at *Mekaniks* ay walang positibong epekto sa pagganap ng mga mag-aaral. Ang *F-test* ng lahat ng modelo ay hindi makabuluhan ($F(6, 126) p > 0.05$), nagpapahiwatig na ang *regression model* ay hindi tugma sa mga datos. Ang *standard error of the estimate*, na sumasalamin sa *average deviation* sa pagitan ng sinusunod at hinulaan na pagganap ng mga mag-aaral.

Base sa datos na nakalap, ipinapakita nito na walang makabuluhang epekto sa pagganap ng mga mag-aaral at 0.05 antas ng kabuluhan. At ipinapakita din nito na ang walang bisang palagay na “*Walang makabuluhang epekto sa akademikong sulatin sa pagganap ng mga mag-aaral*” ay

Talahanayan 13 Planong gawain na iminungkahi batay sa resulta ng pagsusuri

Layunin	Istratehiya/Gawain	Tiyak na Gawain	Taong Kasangkot	Panahon ng Pagsasagawa
Nabibigyang lunas ang mga mag-aaral na may kahinaan sa akademikong sulatin	Paunang Pagtataya	Pagbibigay ng panimulang pagtataya at pagsusulit para matukoy ang kaantasan ng mga mag-aaral.	Mga Guro sa Filipino Mga mag-aaral	Agosto 2024
Nakapagsasagawa ng mga pagsasanay o SLAC para sa mga guro ukol sa mga pamamaraan at estratehiya sa pagtuturo ng akademikong sulatin.	Ang mga guro ay magkakaroon ng kasanayan at makabuluhang kaalaman sa pagtuturo ng mga aralin.	School Learning Action Cell (SLAC)	Mga Guro, dalubguro at ulongguro.	Agosto 2024 – Enero 2025
Napauunlad ang kakayahan ng mga mag-aaral particular ng mga hindi bihasa sa akademikong pagsulat.	Pagdarao ng <i>Seminar: Pagpapaunlad sa Kasanayang Pagsulat ng Sanaysay sa mga mag-aaral ng Baitang 11</i> (Improving Essay Writing Skills)	Pagkakaroon ng seminar para sa mga mag-aaral na nagnanais mapaunlad ang kanilang pagsulat pang-akademiko tulad ng pagsulat ng sanaysay.	Mga Guro, dalubguro at ulongguro. Mga piling mag-aaral	Setyembre 2024 – Enero 2025
Nahahasa at nalililang ang kasanayan ng mga mag-aaral sa akademikong pagsulat.	<i>Worksyap: Pagsasanay sa Akademikong Pagsulat</i> ANG UGAT: <i>Campus Journalism</i>	Magkakaroon ng sesyon ng worksyap sa paghahasa sa kasanayang pagsulat tuwing araw ng Biyernes.	Mga Guro Miyembro ng Ang Ugat Mga piling mag-aaral	Setyembre 2024 – Enero 2025

tanggapin, ipinapakita nito na walang epekto sa pagitan nila.

Samakatuwid, sa pamamagitan ng pagsusuri ng mga datos at resulta ng pananaliksik, napagtanto na ang PanitikLoSan ay maaaring hindi ang pinakamabisang kasangkapan sa pagtuturo ng akademikong sulatin.

Planong gawain ang iminungkahi batay sa resulta ng pagsusuri

Ipinakikita sa bahaging ito ay ang planong Gawain ang iminumungkahi batay sa resulta ng pagususri ukol sa PanitikLoSan bilang kasangkapan sa lokal at kontekstwalisadong pagkatuto sa pagganap ng mga mag-aaral.

Ang talahayan ay naglalaman ng Layunin, Istratehiya, Tiyak na Gawain, Taong Kasangkot, at Panahon ng Pagsasagawa.



Paghahanda/pagbuo ng kagamitang panlinang (*Strategic Intervention Material o SIM*) para sa mga batayang kasanayan sa pagsulat

Pangasiwaan ng tagapag-ugnay sa Filipino, dalubguro, at iba pang dalubhasa sa Asignatura.

Paghahanda ng makabagong kagamitang panturo.

Mga Guro, dalugguro, at ulongguro

Setyembre 2024 – Enero 2025

4. KONKLUSYON AT REKOMENDASYON

Sa pagbibigay-linaw ng lagom ng mga natuklasan, ang sumusunod na konklusyon ay nabuo:

1. Sa haypotesis na nagsasabing “Walang makabuluhang epekto sa PanitikLoSan bilang Kasangkapan ng Lokal at Kontekstwalisadong Pagkatuto sa pagganap ng mga mag-aaral”, ay tinatanggap. Ibig sabihin ay walang positibong epekto ang materyal.

2. Sa haypotesis na nagsasabing “Walang makabuluhang epekto ang akademikong sulatin sa pagganap ng mga mag-aaral.”, ay tinatanggap rin. Samakatuwid, hindi na bago sa mga mag-aaral ang ganitong kasangkapan sa pagkatuto ng akademikong sulatin at pagganap ng mga mag-aaral.

Batay sa mga natuklasan at konklusyong nabuo, ang mga rekomendasyon na ito ay naglalayong magbigay ng mga alternatibong paraan at oportunidad para sa pag-unlad at pagpapabuti sa edukasyon at pagkatuto sa kabila ng konklusyon na walang makabuluhang epekto ang PanitikLoSan sa pagganap ng mga mag-aaral.

1. Ang mga guro at dalubguro sa Filipino ay maaaring gumamit ng iba't ibang kasangkapan at materyales sa pagtuturo ng akademikong sulatin na hindi umaasa sa PanitikLoSan.
2. Ang mga guro ay maaaring magpatuloy sa paghihikayat sa mga mag-aaral sa pagpapabuti sa kanilang mga kasanayan sa pagsulat ng akademiko.
3. Ang punong-guro ng paaralan ay maaaring ipagpatuloy ang suporta sa mga guro at dalubguro na mag-organisa ng mga pagsasanay, seminar, worksyap o SLAC na magpapaunlad sa pagtuturo ng akademikong sulatin.

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UNDERSTANDING OF STHOOLA PRAMEHI AND KRISHA PRAMEHI IN RELATION TO DIABETES MELLITUS

¹Dr. Bhabani Shankar Panigrahi, ² Dr. Utkalini Nayak, ³ Dr. Manoranjan Sahu

¹M.D Scholar, Department of Roga Nidan Evam Vikriti Vigyan, Govt. Ayurvedic College & Hospital, Balangir, Odisha

²Reader, Department of Roga Nidan Evam Vikriti Vigyan, Govt. Ayurvedic College & Hospital, Balangir, Odisha

³Lecturer, Department of Roga Nidan Evam Vikriti Vigyan, Govt. Ayurvedic College & Hospital, Balangir, Odisha

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ABSTRACT

Ayurveda, the ancient Indian system of medicine, classifies diseases based on Doshic imbalances. Among these, Prameha is a group of disorders, which bear a resemblance to the modern understanding of Diabetes Mellitus. Prameha is further classified into Sthoola Pramehi (associated with obesity) and Krisha Pramehi (associated with leanness). According to Ayurveda, Sthoola Pramehi results from the imbalance of Kapha and Meda (fat tissue) and the obstruction of normal body channels (Srotas) leading to insulin resistance, a hallmark of Type 2 Diabetes Mellitus. Modern correlations suggest that Sthoola Pramehi is akin to obesity-related diabetes, where the body's cells fail to respond effectively to insulin. Krisha Pramehi (Lean Diabetic) on the other hand, is observed in individuals with a lean body constitution. This condition is associated with the imbalance of Vata and depletion of Dhatus (body tissues), leading to frequent urination, emaciation, and general weakness. Krisha Pramehi aligns more closely with Type 1 rather than Type 2 Diabetes Mellitus, where the pancreas produces little or no insulin, necessitating external insulin administration. Both Sthoola and Krisha Pramehi manifest due to improper diet and lifestyle, leading to the accumulation of Ama (toxins) and impaired Agni (digestive fire). This results in altered glucose metabolism and urinary anomalies. Ayurvedic management of Prameha focuses on balancing the Doshas and restoring normal metabolic functions. Sthoola Pramehi is treated with therapies aimed at reducing Kapha and Meda, such as dietary modifications, regular physical activity, and herbal formulations like Nisha Triphala Yoga. Krisha Pramehi management involves strengthening the Dhatus and balancing Vata through nourishing diets, Rasayana (rejuvenative) herbs, and specific Panchakarma procedures.

KEYWORDS: - Ayurveda, Prameha, Sthoola Pramehi, Krisha Pramehi, Diabetes Mellitus, Type 1 Diabetes, Type 2 Diabetes, Meda Dhatu, Insulin Resistance, Metabolic Disorders, Traditional Medicine.

AIM AND OBJECTIVES

Aim

To explore the Ayurvedic concepts of Sthoola Pramehi and Krisha Pramehi and their relationship with Diabetes Mellitus.

Objectives

1. Compare the clinical presentations of Sthoola Pramehi and Krisha Pramehi with Diabetes Mellitus.
2. Examine the diagnostic criteria used in Ayurveda and modern medicine for these conditions.
3. Analyse traditional Ayurvedic treatments and their integration with contemporary diabetes management.
4. Promote a holistic approach by combining Ayurvedic and modern medical perspectives for enhanced patient care.

Methodology

The methodology for understanding Sthoola Pramehi and Krisha Pramehi in relation to Diabetes Mellitus involves a comparative analysis of Ayurvedic texts and modern medical literature. This includes identifying symptoms, causes, and treatments of Prameha from Ayurvedic sources and correlating them with the clinical features, pathophysiology, and management of Diabetes Mellitus as described in contemporary medical science. Clinical studies and case reviews will also be

conducted to assess the relevance and applicability of traditional Ayurvedic concepts in the diagnosis and treatment of Diabetes Mellitus.

INTRODUCTION

Diabetes mellitus is a long-term metabolic disease defined by raised blood glucose levels carried on by deficiencies in the action or secretion of insulin, or both. The prevalence of diabetes is rising globally, making it a major public health concern. Ayurveda, the traditional Indian system of medicine, offers a unique perspective on diabetes through the concept of Prameha. Prameha encompasses a group of urinary disorders, which include conditions that closely resemble the symptoms and pathophysiology of Diabetes Mellitus. Among the various types of Prameha, Sthoola Pramehi and Krisha Pramehi are particularly significant as they parallel the modern understanding of Type 2 and Type 1 Diabetes Mellitus, respectively. This article explores the Ayurvedic classification, pathophysiology, and management of Sthoola and Krisha Pramehi, providing insights into their relevance in contemporary diabetes care.

Ayurvedic Concept of Prameha:

Prameha is a broad term used in Ayurveda to describe a spectrum of urinary disorders that are primarily characterized



by the excessive passage of urine. The word "Prameha" is derived from the Sanskrit roots "Pra"(excessive) and "Meha" (urine). Classical *Ayurvedic* texts ^{[1][2][3]}, such as the *Charaka Samhita*, *Sushruta Samhita* and *Astanga Hridaya*, describe 20 types of *Prameha* based on the predominance of different *Doshas* (biological energies). These are further divided into three categories based on differentiation in *Varna*, *Gandha*, *Sparsa* of urine ^[4] i.e., *Kapha Prameha*, *Pitta Prameha*, and *Vata Prameha*.

Kapha Prameha: Predominantly caused by an imbalance in *Kapha Dosha*, characterized by heaviness, lethargy, and increased urination with sweet, oily, and sticky urine ^[5].

Pitta Prameha: Predominantly caused by an imbalance in *Pitta Dosha*, characterized by burning sensations, increased thirst, and yellowish, foul-smelling urine ^[6].

Vata Prameha: Predominantly caused by an imbalance in *Vata Dosha*, characterized by dry, rough, and pale urine, along with symptoms like dryness and emaciation ^[7].

- *Sthoola Pramehi* and *Krishna Pramehi* fall under these broader categories and provide specific insights into the metabolic derangements similar to Type 2 and Type 1 Diabetes Mellitus.

✚ **Sthoola Pramehi (Obese Diabetic):** -

Sthoola Pramehi is one of the subtypes of *Prameha* (urinary disorders), it is primarily associated with obesity and is considered a *Kapha*-dominant disorder.^[8] It is characterized by excessive body weight, lethargy, and the presence of turbid, sweet frequent urination. The pathophysiology of *Sthoola Pramehi* involves the imbalance of *Kapha* dosha and *Meda Dhatu* (fat tissue), leading to the obstruction of normal metabolic pathways.

Pathophysiology

❖ **Kapha Imbalance:** *Kapha Dosha*, when aggravated, leads to increased heaviness, sluggishness, and accumulation of adipose tissue. This creates a conducive environment for the development of insulin resistance.

❖ **Meda Dhatu Imbalance:** ^[9]

- *Meda Dhatu* is considered the seventh *Dhatu* in *Ayurveda* and is responsible for the maintenance of fat in the body. When *Kapha* is vitiated, it increases the *Meda Dhatu* abnormally.
- The excess of *Meda Dhatu* leads to the obstruction (*Avarana*) of channels (*Srotas*), particularly those associated with *Vata Dosha*, which further aggravates the condition.
- This results in a cascade of metabolic disturbances where the digestion and metabolism of other *Dhatu*s (tissues) are compromised, leading to a disproportionate increase in *Meda Dhatu*, contributing to obesity and furthering the pathology of *Sthoola Pramehi*.

❖ **Formation of Mala (Impurities):**

- Due to improper metabolism and excessive formation of *Meda*, the body starts producing excessive *Kleda* (moisture) and other

byproducts, which manifest as the signs and symptoms of *Prameha*.

- The increased *Kleda* and *Meda* block the normal functioning of the *Mutravaha Srotas* (urinary channels), leading to *Prameha*.^[10]

❖ **Impaired Jatharagni (Agnimandya):**

- *Jatharagni* is the main digestive fire located in the stomach and duodenum, responsible for digesting food and transforming it into *Ahara Rasa*, which is then converted into different *Dhatu*s.^[11]
- When *Jatharagni* is impaired, a condition called *Agnimandya* occurs. This leads to improper digestion of food, resulting in the formation of *Ama* (undigested metabolic waste/toxin).
- *Ama* is considered the root cause of many diseases, including *Prameha*. It disrupts normal metabolic processes and contributes to the pathological accumulation of *Meda Dhatu*.^[12]

❖ **Combined Pathophysiology:**

Impaired Jatharagni and Meda Dhatu Imbalance:

- When *Jatharagni* becomes impaired, a condition known as *Agnimandya* leads to incomplete digestion, causing the production of *Ama*, which combines with the vitiated *Kapha Dosha*, further aggravating *Kapha* and leading to excessive accumulation of *Meda Dhatu*.
- The improperly formed *Rasa Dhatu* (plasma tissue) due to weak *Jatharagni* results in the excessive formation of *Meda*, as the process of *Dhatu Poshana* (nourishment of tissues) becomes faulty, which disrupts the formation of subsequent *Dhatu*s (*Asthi*, *Majja*, *Shukra*), leading to systemic weaknesses and contributing to the chronic nature of *Sthoola Prameha*.
- The excessive *Meda* blocks the body's normal channels (*Srotas*), get accumulated in various parts of the body, especially those involved in excretion and metabolism, contributing to obesity and the pathogenesis of *Sthoola Prameha*.

Avarana (Obstruction) and Vata Imbalance:^[13]

- The blockage of channels due to excess *Meda Dhatu* leads to *Avarana*, a condition where the normal movement of *Vata Dosha* is obstructed. This causes further metabolic and systemic imbalances, worsening the condition.
- *Vata*, being obstructed, becomes vitiated and circulates improperly within the body, contributing to irregular metabolic activities, causing the typical symptoms of *Prameha*, such as increased urination, obesity, heaviness and lethargy.

❖ **Clinical Features:**

- Obesity and excessive body weight
- Frequent urination (*Prabhuta Mutrata*)
- Sweet, turbid urine (*Avila Mutrata*)
- Lethargy and heaviness
- Increased thirst (*Trishna*)
- Fatigue and low energy levels

❖ **Modern Correlation:**^[14]

The term "*Sthoola*" means "obese" or "corpulent," and "*Pramehi*" refers to a disorder that involves excessive urination, often associated with abnormal sugar levels in the urine.



Correlation of *Sthoola Pramehi* with Type 2 Diabetes

1. Obesity and Insulin Resistance:

- *Sthoola Pramehi* is closely related to obesity, which is a significant risk factor for **Type 2 Diabetes**. In Type 2 Diabetes, the body becomes resistant to insulin or does not produce enough insulin, leading to elevated blood sugar levels. Obesity contributes to insulin resistance, making it difficult for the body to utilize insulin effectively.
- *Ayurvedic* texts describe *Sthoola Pramehi* as involving excessive body fat and lethargy, which aligns with the modern understanding of the pathophysiology of Type 2 Diabetes, where obesity is a common characteristic.

2. Lifestyle and Dietary Factors:

- *Sthoola Pramehi* is often attributed to sedentary lifestyles, excessive consumption of fatty and sugary foods, and lack of physical activity, which are also primary contributors to the development of Type 2 Diabetes. Modern medicine recognizes these factors as leading to the metabolic syndrome, which increases the risk of developing Type 2 Diabetes.

3. Gradual Onset:

- Type 2 Diabetes typically develops gradually, often over several years, and is more common in adults, especially those who are overweight or obese. *Sthoola Pramehi* is described as a condition that develops slowly and is more common in individuals with excessive body weight, which mirrors the slow onset of Type 2 Diabetes.

Insulin resistance and hyperinsulinemia are characteristics of Type 2 Diabetes Mellitus, which is correlated with *Sthoola Pramehi*. Type 2 diabetes features obesity as one of its main risk factors, especially central obesity. Obese people's excess adipose tissue raises their levels of free fatty acids and inflammatory cytokines, which disrupt insulin signalling pathways. As a result, the body's cells become less sensitive to insulin, requiring greater insulin concentrations to sustain normoglycemia. The increased demand for insulin over time may cause pancreatic beta cells to become less effective, which would result in hyperglycemia and the clinical signs of Type 2. However, in Type 1 Diabetes, immunological and genetic factors—rather than Diabetes lifestyle or body weight—are responsible for the reduction of insulin production, which does not align with the characteristics of *Sthoola Pramehi*.

✚ *Krishna Pramehi* (Lean Diabetic):^[15] -

Krishna Pramehi is associated with a lean body constitution and is considered a *Vata*-dominant disorder often combined with *Pitta*. This vitiation affects the body's ability to properly metabolize nutrients, leading to the degeneration of *Ojas* (vital essence) and *Dhatu*s (tissues), particularly *Mamsa* (muscle) *Dhatu* and *Medas* (fat) *Dhatu*. It is characterized by emaciation,

weakness, and frequent urination with pale and dry urine. The pathophysiology of *Krishna Pramehi* involves the imbalance of *Vata Dosh*a and the depletion of *Dhatu*s (body tissues).

Pathophysiology

Vata Imbalance: *Vata* dosha, when aggravated, leads to dryness, roughness, and catabolic processes in the body. This results in the depletion of vital tissues and energy reserves.

Dhatu Kshaya (Tissue Depletion): The depletion of *dhatu*s, particularly *Mamsa* (muscle tissue) and *Meda* (fat tissue), impairs the body's ability to maintain energy balance and glucose homeostasis. This leads to increased gluconeogenesis and hyperglycaemia.

Causative Factors in Ayurveda:

- Excessive consumption of dry, light, and astringent foods.
- Over-exertion, stress, and lack of proper nourishment.
- Genetic predisposition (*Sahaja Prameha*).^[16]
- Aggravation of *Vata* and *Pitta doshas*.

Clinical Characteristics:^[16]

- Pale, dry urine (*Shweta, Ruksha Mutrata*)
- Increased thirst (*Trishna*)
- Frequent urination (*Prabhuta Mutrata*)
- General tiredness and restlessness
- Dry skin and mucous membranes

Modern Correlation:^[17]

Krishna Pramehi is associated with Type 1 Diabetes Mellitus, an autoimmune disease that results in the breakdown of beta cells in the pancreas. As a result, there is a complete insulin shortage, which makes exogenous insulin delivery necessary for survival. When beta cells are destroyed by the immune system, there is insufficient insulin produced, which increases lipolysis and glucagon activity without inhibition, resulting in hyperglycemia and ketosis. Similar to *Krishna Prameha*, signs of Type 1 Diabetes can include polyuria, polydipsia, polyphagia, and inexplicable weight loss.

Causative Factors in Modern Medicine:

- The autoimmune destruction of pancreatic beta cells and inherited predisposition (variants of the HLA gene) are causative factors in modern medicine.
- Environmental triggers, such as infections with viruses.

The Ayurvedic notion of *Krishna Prameha* closely aligns with the way Type 1 Diabetes is currently understood in medicine. Though the fundamental causes of *Ayurvedic Vata-Pitta* imbalance and frequent urination differ from those of Type 1 Diabetes, both conditions cause bodily tissues to deteriorate and exhibit symptoms such as autoimmune destruction of beta cells and weight loss.

Ayurvedic Management of Prameha:

Ayurvedic management of *Prameha* focuses on restoring *Doshic* balance, enhancing *Agni* (digestive fire), and promoting healthy metabolic function. The treatment approach varies based on the type of *Prameha*, with specific emphasis on



reducing *Kapha* and *Meda* in *Sthoola Pramehi* and balancing *Vata* and nourishing *Dhatus* in *Krishna Pramehi*.

- ***Sthoola Pramehi* Management:** -^[18]

Dietary Adjustments

***Kapha*-Pacifying Diet:** Emphasises light, dry, and warm meals. Avert cold, greasy, and heavy foods.

Minimal Glycaemic Index Foods:

^[19] Low GI foods absorb and digest more slowly, raising blood sugar levels slowly as opposed to suddenly. To keep blood glucose levels steady, eat whole grains (quinoa, brown rice), legumes (lentils), and non-starchy vegetables. These foods frequently have high levels of fibre, which encourages fullness and helps with weight loss. Low GI foods are in accordance with the method of reducing *Medas* (fat) and *Kapha* since they lower the heaviness and lethargic feeling that come with *Sthoola Pramehi*.

Herbal Teas: Use of herbal teas with *Trikatu* (a blend of black pepper, long pepper, and ginger) to enhance digestion and metabolism.

Lifestyle Modifications:

Regular Physical Activity: Incorporate regular exercise to enhance insulin sensitivity and promote weight loss.

***Yoga* and *Pranayama*:** Practices such as *Surya Namaskar* (Sun Salutation) and *Kapalabhati* (breath of fire) to balance *Kapha* and improve metabolic function.

Herbal Remedies:

^[20] ***Triphala*:** A combination of three fruits (*Amalaki*, *Bibhitaki*, *Haritaki*) that aids digestion and detoxification.

***Guggulu*:** An herbal resin known for its lipid-lowering and anti-inflammatory properties.

***Vijaysar*:** *Pterocarpus marsupium*, known for its hypoglycaemic effects.

Panchakarma (Detoxification Therapies):

***Vamana* (Therapeutic Emesis):** Indicated for *Kapha* disorders to eliminate excess mucus and toxins.

***Lekhana Basti* (Scraping Enema):** To remove excess *Meda* (fat tissue) and improve metabolism.

- ***Krishna Pramehi* Management:** -^[21]

Dietary Modifications

Vata*-Pacifying Diet:** Emphasize foods that are warm, moist, and nourishing. Include ghee, milk, and well-cooked grains. These foods support the regeneration of depleted ***Dhatus (tissues) and improve overall body strength.

Nutrient-Dense Foods (act as *Brimhana*): Include nuts, seeds, and healthy fats to promote tissue building and energy and balancing *Vata dosha*. Legumes, dairy, and lean meats aid in rebuilding muscle tissue and supporting strength. Whole grains like brown rice and quinoa provide sustained energy and are easier on blood sugar levels. Adequate nutrition strengthens the immune system, which is often compromised in Type 1 Diabetes.

Lifestyle Modifications:

^[22] **Moderate Exercise:** A To sustain vitality without inflaming *Vata*, try walking and light yoga.

Adequate Rest: Ensure sufficient rest and stay clear of too much physical or mental stress.

Herbal Remedies

***Ashwagandha*:** *Withania somnifera* is a plant with rejuvenating and adaptogenic qualities.

***Shatavari*:** *Asparagus racemosus* a plant that fortifies and nourishes bodily tissues.

***Amalaki*:** *Emblica officinalis* high in antioxidants and vitamin C to support healthy immunity and vigour.

Panchakarma (Detoxification Therapies):

***Basti* (Medicated Enema):** To balance *Vata* and nourish the *Dhatus*.

***Rasayana* Therapy:** Rejuvenated treatments to enhance *Ojas* and overall vitality.

Integrative Approach to Diabetes Management

^[23] The integration of *Ayurvedic* principles with modern medical practices can offer a holistic approach to diabetes management. Combining dietary and lifestyle modifications, herbal remedies, and conventional treatments can address both the symptoms and root causes of diabetes, promoting overall health and well-being.

1. Prevention:

Lifestyle Interventions: Encourage a nutritious diet, regular exercise, and stress-reduction techniques to postpone the onset of diabetes.

Early Detection: Regular blood glucose tests and metabolic marker monitoring are essential for the diagnosis and treatment of prediabetes.

2. Adapted Care:

***Doshic* Evaluation:** Therapy plans tailored to the individual imbalances and *Doshic* makeup of the patient.

Herbal Supplements: Use of evidence-based herbal supplements in conjunction with prescribed medications to enhance therapeutic outcomes.

3. Patient Education:

Empowerment: Educate patients about the importance of lifestyle choices, dietary habits, and self-care practices in managing diabetes.

Holistic Care: Promote a holistic approach to health that encompasses physical, mental, and emotional well-being.

CONCLUSION

Sthoola and *Krishna Pramehi*'s *Ayurvedic* understanding of diabetes mellitus offers important insights into its holistic management. *Ayurveda* provides a complementary approach to current diabetes management by addressing the underlying *Doshic* imbalances and encouraging good metabolic function. By combining the principles of *Ayurveda* with traditional medicine, diabetes can be better prevented, treated, and



managed overall, which will ultimately improve patient outcomes and quality of life. Diabetes care could become a more complete and efficient health paradigm through the synthesis of traditional knowledge and modern science.

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RECLAIMING COMMUNITIES: EVALUATING THE BARANGAY DRUG CLEARING PROGRAM'S IMPACT ON SUBSTANCE ABUSE ERADICATION IN MALITA, DAVAO OCCIDENTAL

Winchelle Lou Moron Lopez

Master of Science in Criminal Justice with Specialization in Criminology, The Faculty of the Graduate School, Philippine College of Criminology

ABSTRACT

The objective of this study is to discover the great participation of each Barangay Anti-Drug Abuse Councils in successfully implementing the Barangay Drug Clearing Program in their respective areas. This study aims to identify problems, issues, and concerns that hamper or delay the successful implementation of the Barangay Drug-Clearing Program in every barangay. To answer this, the researcher compared responses from Barangay Anti-Drug Abuse Council functionaries of Malita, Davao Occidental. The study revealed that Barangay Anti-Drug Abuse Councils highly implemented the processes during the implementation of the Barangay Drug Clearing Program from the foundation stage, pivotal stage, and sustainability stage. Furthermore, this study revealed that the Barangay Anti-Drug Abuse Councils of Malita, Davao Occidental are Highly Functional in the implementation of the Barangay Drug Clearing Program. Lastly, this study revealed that Barangay Anti-Drug Abuse Councils often face challenges during implementing the barangay drug-clearing program. The implications of this study can be used to promote and encourage the conduct of capacity-building seminars, training, workshops, symposiums, and the like to enhance the capacity of all implementers and conduct refresher activities to remind, update, and reorient implementers of Barangay Drug Clearing Program and that they should work harmoniously and develop camaraderie in developing programs related to demand and supply reduction strategies to achieve the successful outcome of its efforts in the fight against illegal drugs. This study is to review and present other suitable strategies to further improve the implementation of the Barangay Drug Clearing Program and be able to sustain the benefits of being a drug-free/cleared community. Through this research, researchers can conduct more studies on the underlying problems encountered by other communities in the implementation of the Barangay Drug Clearing Program. We learn not from others' mistakes but from others' experiences to develop resilience and be able to address the menace brought by illegal drugs to every community not only in our province here in Davao Occidental but also in other communities in this country.

KEYWORD: *Bdcp-Barangay Drug Clearing Program. Badac-Barangay Anti Drug Abuse Council Substance Abuse and Malita, Davao Occidental*

INTRODUCTION

Addiction can be a never-ending, agonizing struggle for the drug user; suffering is needlessly increased when they are denied access to evidence-based treatment or face discrimination. The consequences of drug use can have ripple effects that hurt families, potentially across generations, as well as friends and colleagues. Using drugs can endanger your health and mental health and is especially harmful in early adolescence. Illicit drug markets are linked to violence and other forms of crime. Drugs can fuel and prolong the conflict, and the destabilizing effects as well as the social and economic costs hinder sustainable development.

Treatment and rehabilitation of drug dependents is an essential component of drug demand reduction. Republic Act 9165, or "The Comprehensive Dangerous Drugs Act of 2002," as amended (the "Act"), mandates that it is the state policy to provide

effective mechanisms or measures to reintegrate into society individuals who have fallen victims to drug abuse or dangerous drug dependence through sustainable programs of treatment and rehabilitation.

The convenient availability of drugs, the acceptance of drug use, the lack of access to resources, the nerve-wracking intimidation, and the poor quality of public services all contribute to the problems of individual addiction in communities. The ill effects of the abuse of illegal drugs not only concern the individual addicts themselves but also affect their family and their community as a whole. The presence of illegal drugs in our communities leaves a bad impression on every community.

The Barangay Drug Clearing Program aims to reduce drug abuse in the country by taking away drugs from the people, taking people away from the lure of illegal drugs, and impacting the drug problem in the community by integrating the support of



stakeholders, duty bearers, and local chief executives. The ultimate goal is to realize drug-resilient and self-policing communities and produce stigma-free rehabilitated Persons Who Use Drugs (PWUDs) and drug reformists.

The prevalence of illegal drugs in the Philippines has not been accurately determined. However, estimates by the UNODC showed the annual prevalence of marijuana is 3.5 percent, amphetamine-type stimulants are 2.8 percent, and ecstasy is 0.01 percent of the population above 15 years of age. According to the 2003 International Narcotics Control Strategy Report, it is estimated that there are 1.8 million drug users in the Philippines, which is equivalent to 2.2 percent of the population.

There are a variety of factors that influence the prevalence of the prevalence of illegal drugs in the Philippines, namely:

1. geographic factors that make patrolling and protecting the country from smugglers of methamphetamine and planters of marijuana difficult;
2. economic factors such as poverty;
3. social factors, such as the phenomenon of the overseas contract worker; and
4. media exposure and the decreasing moral fabric of society; and political factors such as policies, drug laws, and enforcement.

Pursuant to Section 5, DDB Regulation 4, series of 2021, the Barangay Drug Clearing Program (BDCP) is a holistic and whole-of-nation approach to addressing the drug problem with the aim of attaining resilient and self-policing communities by enlisting the participation of LGUs, government agencies, and various stakeholders.

Barangay Anti-Drug Abuse Council. BADAC is the grassroots local special body of the DILG, aimed at organizing barangay officials and other stakeholders as the first line of defense in countering drug-related crimes in barangays. Pursuant to DILG Memorandum Circular 2015-063, "Revitalization of the Barangay Anti-Drug Abuse Councils (BADAC) and their role in the Drug Clearing Operations, which was then amended by Dangerous Drugs Board Regulation No. 3, series of 2017's Section 1, which has the title "Strengthening the Implementation of the Barangay Drug Clearing Program, BADAC was created in every barangay in the Philippines. The regulation then enumerated the significant roles that the BADAC performed in terms of its authority and duties in implementing the Barangay Drug Clearing Program.

Literature Review

As per the record in the PDEA Regional Office XI, as of December 2023, the province of Davao Occidental has only a remainder of 1 affected barangay out of the 105 barangays in the province. The municipality of Malita, belonging to the province of Davao Occidental is among the two (2) municipalities in the province that were declared "drug-cleared" municipalities on

November 17, 2022, since all of its thirty (30) barangays were already declared "drug-cleared" barangays" and were also validated by the Regional Oversight Committee on the Barangay Drug Clearing Program (ROCBDC) as drug-cleared barangays for the case year 2022.

The successful implementation of the Barangay Drug Clearing Program according to DDB Reg No. 4, Series of 2021, not only lies in the efforts of the Department of Interior and Local Government (DILG), PNP, and PDEA. It relies on active collaboration and cooperation with the LGU and other stakeholders. Its main character in the implementation of the BDCP is the role being handed to the respective Barangay Anti-Drug Abuse Councils (BADAC) in each locality.

This study will allow us to discover the great participation of each BADAC in the successful implementation of the Barangay Drug Clearing Program in their respective AORs. The researcher aims to applaud the efforts of all BADAC in their consistent desire to eradicate the proliferation of illegal drugs and be able to make their respective barangays a drug-resilient, self-policing, and drug-free barangay. This study aims to identify problems, issues, and concerns that hamper or delay the successful implementation of the Barangay Drug-Clearing Program in every barangay.

According to the report of the National Institute on Drug Abuse (2020), the first step in planning a drug abuse prevention program is to assess the type of drug problem within the community and determine the level of risk factors affecting the problem. The results of this assessment can be used to raise awareness of the nature and seriousness of the community's problem and guide the selection of the best prevention programs to address it.

According to Werb (2016), there is limited scientific literature evaluating compulsory drug treatment. Evidence does not, on the whole, suggest improved outcomes related to compulsory treatment approaches, with some studies suggesting potential harms. Given the potential for human rights abuses within compulsory treatment settings, non-compulsory treatment modalities should be prioritized by policymakers seeking to reduce drug-related harms.

According to Ardepolla (2021), the barangay (community) drug clearing program is anchored on a culture of cooperation, respect for human dignity, holistic strategies, and a whole-of-nation approach, which are considered the most effective platforms for addressing the drug problem. It aimed at reducing the drug problem in the country by taking away drugs from the people, taking the people away from the lure of illegal drugs, and minimizing the impact of the drug problem in the barangay (community). The BDCP provides systematized processes for determining the extent of drug affectation in every barangay in the country and for declaring the same as drug-cleared or drug-free through evaluation, deliberation, and validation. In effect,



cities, municipalities, and provinces will also be declared drug-cleared or drug-free.

Under RA 9165, also known as the Comprehensive Dangerous Drugs Act of 2002, the Barangay Anti-Drug Abuse Council, a body of barangay members organized and mandated to assist law enforcement agencies (LEAs) in the eradication and clearing operations of illegal drugs, was created and reactivated.

However, the Dangerous Drugs Board (2014) states that society's smallest and most functional unit is expected to bolster and reinforce the government's ordinances. The social environment of the barangay has been bewildered and tainted due to its continuous use of drugs. It has become alarming and contentious. The claimed involvement of barangay authorities in drug cases throughout the region impedes the implementation of drug clearance operations. These flaws might be linked to the dynamics of the drug issue and the misaligned roles and duties of the primary characters and parties involved.

The menace brought by rampant illegal drug use and trade is a worldwide crisis. Heads of different countries and states have formulated and developed numerous plans and programs to address illegal drug problems. With the above discussions, it would appear that each country or government may have different approaches or methods. One thing is common among them, and that is that illegal drug abuse may only be addressed through coordination, cooperation, and appropriate education, be it personally or within the family, community, or country as a whole.

Through previous studies conducted related to this topic and the findings of this study, BADAC members in the Municipality of Malita will be able to identify further ways and means to improve their implementation of the barangay drug clearing program.

The UNODC is in charge of the international effort to increase public awareness of the serious problem that illegal drugs pose to society in general and young people in particular. The campaign's objective is to rally support and motivate individuals to take action against drug use.

UNODC encourages as many awareness-raising activities as possible around the globe and invites individuals, non-profit organizations, the private sector, and Member States to get involved by:

- Organizing outreach or institutional events to mark June 26, the International Day against Drug Abuse and Illicit Trafficking
- Spreading the word about the campaign through your networks and contacts
- Using the campaign slogan and logo in promotional products, websites, and social media

- Donating funds to your local NGO in support of drug prevention and treatment efforts or making in-kind contributions to the campaign and related events

Several factors influence participation in treatment programs. A small body of literature evaluates these factors, which include motivation, preexisting mental health disorders, diagnoses, family support, and demographic variables such as gender, race, ethnicity, and age (Haughwout et al., 2016; Settapani et al., 2018; Groshkova, 2010; McHugh et al., 2018). Studies examine various aspects of participation, including program initiation, program engagement, and program completion (Bowers, 2021; Haughwout et al., 2016; Becan et al., 2015).

Romualdo (2021) stated that the analytical functionality model delineates the social environment of BADAC, which is powerfully shaped by the policies, ordinances, mandates, and strong political will. Therefore, it is recommended that coordination and concerted efforts among the law enforcement agencies, the LGU, and the community multiply the force for effective implementation of the drug-clearing operations.

Findings in the study of Cabangon (2020) showed that the minimal occurrence of difficulties experienced during the implementation of the barangay drug clearing program indicates that BADAC is not fully functional. Furthermore, the Barangay Anti-Drug Abuse Council experienced minimal occurrences of difficulties in the implementation of BADAC activities. Hence, it can be concluded that the BADAC in all barangays in CABAGAN and ISABELA are duly structured and have conformed to the mandated functions for the operation of the council.

Tanjay (2020) stated that in support of the barangay drug clearing strategy of the Philippines, the Oplan Double Barrel program was implemented under PNP Command Memorandum Circular No. 16-2016. The program impacted almost all sectors of the community, especially the drug surrenderees. This quantitative descriptive research evaluated the level of implementation of PNP Oplan Tokhang in the province of Camarines Sur. It determined the effectiveness of intervention strategies for the rehabilitation of the drug surrenderees. Data revealed that three (3) phases of Oplan Tokhang were effectively implemented. However, the problem is the scarcity of financial resources to provide health and other social services, insufficient rehabilitation personnel, and limited rehabilitation facilities. Hence, the government should increase budget allocation for rehabilitation services and strengthen holistic community-based rehabilitation towards effective oplan tokhang.

The Barangay Anti-Drug Abuse Council, a group of barangay members formed and mandated to assist law enforcement agencies (LEAs) in the eradication and clearing operations of illegal drugs, was created and revitalized under RA 9165, also known as the Comprehensive Dangerous Drugs Act of 2002, through Memorandum Circular 2015-63. The Dangerous Drugs



Board (DDB), a policy-making and strategy-forming authority in planning and developing drug-control policies and programs, issued Board Regulation No. 3 to boost barangay drug clearance programs' execution effectively.

Theoretical Framework

The barangay drug clearing program is anchored on a culture of cooperation, respect for human dignity, holistic strategies, and a whole-of-nation approach, which are considered the most effective platforms for addressing the drug problem. It is aimed at reducing the drug problem in the country by taking away drugs from the people, taking the people away from the lure of illegal drugs, and minimizing the impact of the drug problem in the barangay (community). The cooperation among all the stakeholders, different government units and non-government agencies, the community, as well as the clients and their families, is key to the successful outcome of the implementation of this program.

Conceptual Framework

The researcher will use the input-process-Output model as a guide in carrying out this research. In the input, the researcher has identified the extent of the implementation of the Barangay Anti-Drug Abuse Councils (BADAC) in the foundation stage, pivotal stage, and sustainability stage of the Barangay Drug Clearing Program; their functionality level in the Anti-Drug Clearing Operations and Programs; and the identified problems experienced by BADACs.

In the process, the researcher adopted the instrument used in research titled "The Operation of Barangay Anti-Drug Abuse Council (BADAC) in Cabagan, Isabela, Shierly D. Cabangan, 2019, the Barangay Anti-Drug Abuse Council (BADAC) Assessment/Evaluation Form used by the Department of Interior and Local Government during its 2021 BADAC Functionality Audit, as well as the questionnaire used in the research of Usec Wilkins Villanueva with the title "The Barangay Drug Clearing Program in Tanguib City: Basis for an Action Plan to Enhance Implementation" dated CY 2022. The researcher distributed the survey materials to the BADAC Chairman and Barangay Secretaries of the fifteen (15) selected barangays of the municipality of Malita, Davao Oriental, with the assistance and collaboration of the current Municipal Local Government Operations Officer (MLGOO) of the said municipality. Retrieval of the survey materials immediately followed after the respondents had filled them out. After the retrieval of the survey materials, the application of appropriate statistical treatment and analysis of quantitative and qualitative data was then initiated.

In the output, throughout this study, the researcher will be able to recommend the conduct of a series of capability enhancement trainings and seminars, including budgeting, to revitalize and better equip the BADACs to implement the barangay drug clearing program and other anti-drug advocacy activities in their respective barangays. The researcher also sees this opportunity to

formulate new programs and/or develop existing anti-drug programs, policies, and processes in the implementation of the barangay drug clearing program in the barangays to address issues and concerns that will be identified during the conduct of this study.

Significance of the Study

The outcome of this study will be a valuable assessment of the functionality of Barangay Anti-Drug Abuse Councils (BADACs) in the municipality of Malita, Davao Occidental.

This study will also give them insights to the local government (Provincial and Municipal Anti-Drug Abuse Councils-PADAC/MADAC) as to how to make sustainable programs to maintain the functionality of its ADAC and give room for future improvements in the implementation of the Barangay Drug Clearing Program.

To the members of the Technical Working Groups (TWG) in the implementation of the BDCP, this study will uncover gaps, if there are any, among implementers of the BDCP.

For the people in the community, this study will provide awareness and be able to help citizens understand the importance of the proper implementation of the BDCP.

For future researchers, the findings of this study would serve as an entry point to the development and creation of future programs to improve anti-drug efforts in each locality. To be able to come up with sustainable activities and projects in relation to the continuous implementation of the barangay drug clearing program so as to win the war against the illegal drug menace

Statement of the Problem

The researcher aims to investigate the functionality of Barangay Anti-Drug Abuse Councils (BADAC) in the Municipality of Malita, Province of Davao Occidental. Specifically, the researcher intends to answer the following questions:

1. How may the respondents describe the extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in terms of:
 - 1.1 Foundation Stage,
 - 1.2 Pivotal Stage, and
 - 1.3 Sustainability Stage
2. How may the respondents describe the functionality level of BADAC in the implementation of the Anti-Drug Clearing Programs?
3. What is the level of challenges encountered by the BADACs in the implementation of the Barangay Drug Clearing Program?
4. Based on the findings of the study, what enhancement programs may be proposed?

METHODOLOGY

Research Design

The researcher used a quantitative-descriptive research design. Creswell (1994) defined quantitative research as "an inquiry into



a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true." This paper will measure and analyze the responses of respondents to attain the desired outcome and answer the SOPs of this paper.

Research Method

To attain the objectives of the study, the researcher utilized the descriptive method of research. This method of research is applicable to the present study since its objective is to evaluate the functionality of the Barangay Anti-Drug Abuse Councils of the municipality of Malita, Province of Davao Occidental in terms of the extent of their implementation of the barangay drug clearing program, BADACs functionality in the implementation of the said program, the problems encountered during their implementation, and be able to propose necessary programs to address problems encountered during their implementation.

Population of the Study

The researcher used the purposive sampling technique, also known as judgmental, selective, or subjective sampling. Fifteen (15) barangays out of the total 30 barangays in the Municipality of Malita were purposely selected. These barangays were ranked according to the number of PWUDs (Persons Who Used Drugs) processed in their barangay during the implementation of the Barangay Drug Clearing Program. Four (4) members from each Barangay Anti-Drug Abuse Council (BADAC) were purposefully selected to be respondents to this study. These members are the punong barangay, the chairman of advocacy, the chairman of operations, and the barangay secretary, all of whom have vital roles in the implementation of the barangay drug clearing program in their respective barangays. Also, additional respondents will be personnel from the DILG Malita field office, PNP personnel who are designated as Barangay Drug Clearing Program focal persons in barangays in the Municipality of Malita, and representatives of civil society organizations.

Data Gathering Tool/s

The researcher adopted and modified a questionnaire based on the research of Usec Wilkins Villanueva with the title "The Barangay Drug Clearing Program in Tangub City: Basis for an Action Plan to Enhance Implementation" dated CY 2022. Through the instrument from the research of Usec Villanueva, the research was able to describe the extent of implementation of the Barangay Anti-Drug Abuse Council (BADAC) in the three phases of the drug clearing operations (foundation stage, pivotal stage, and sustainability stage).

The researcher also adopted and modified some questions based on the BADAC Functionality Self-Assessment and Audit Form as utilized by the office of the MLGOO of Malita during the conduct of the BADAC Audit for CY 2022 (see attached scanned copy of the BADAC Functionality Self-Assessment and Audit Form).

Lastly, the researcher also adopted and modified an instrument used in the study entitled "The Operation of Barangay Anti-Drug Abuse Council (BADAC) in Cabagan, Isabela" that was published in October 2019. Through this instrument, the researcher was able to identify some challenges faced by respondents as well as the frequency of the identified problems experienced by the BADAC during the implementation of the Barangay Drug Clearing Operations.

Data Gathering Procedure

The following procedures were undertaken in the course of this study:

1. Formulation of letter requests.

First, a letter request was sent to the Office of the Dean of the Graduate School, addressed to Dean Jezreel, to be able to proceed with the conduct of this study.

Second, letter requests were sent to the offices of the Municipal Mayor and MLGOO of DILG Malita, as well as to the offices of the respective BADACs in Malita, to allow and recognize the conduct of this research in their locality.

2. Consultative meetings with BADAC members and MLGOO of the Municipality of Malita.

Consultative meetings for the conduct of this study were conducted to establish rapport among the respondents and to be able to identify the feasibility of the study.

3. Distribution of survey questionnaires

Survey questionnaires used as instruments were distributed at an agreed-upon time and venue to the selected respondents. Such survey questionnaires were also retrieved on the same date after the respondents finished answering.

4. Dialogue with respondents

The researcher conducted a short dialogue with the respondents during the data gathering procedure through the use of questionnaires to validate if the respondents were able to express themselves correctly and verify if they were satisfied with what they had answered through the questionnaire.

5. Tally and tabulate.

The researcher sorted, consolidated, and tabulated responses from the retrieved survey questionnaires. Tabulation and computation of the gathered data were done with the assistance of the statistician. The analysis and interpretation of the data, as well as the presentation of the data in a textual and tabular format, were done with the thesis adviser of the researcher.

Treatment of the Data

The collected data was recorded, established, and evaluated using the following statistical techniques to achieve an in-depth analysis of the data in order to make the study's findings understandable to everyone:

Frequency: the number of times each variable occurs or is recorded in an experiment or study, such as the number of responses.



Mean: the mean value or score of a certain data set is equal to the sum of all values in the data set divided by the total number of values.

Weighted mean: This was used to evaluate the functionalities of the barangay anti-drug abuse councils. The weighted mean was computed by summing the product of item frequency multiplied by the weight of the item and divided by the total number of respondents.

Average Weighted Mean: This was used to determine the extent of the operations of the BADACs in the implementation of the barangay drug clearing program in terms of the foundation stage, pivotal stage, and sustainability stage. Also, it determined the functionality level of BADAC in the implementation of the anti-drug clearing programs and the level of challenges encountered by BADACs in the implementation of the barangay drug clearing program.

Likert scale: is a rating scale used to measure opinions, attitudes, or behaviors. Respondents choose the option that best corresponds with how they feel about the statement or question.

Ethical Considerations

Since the municipality of Malita has diverse ethnic groups, the researcher will consider using “Bisaya” as a way to translate some questions in the questionnaire so that respondents will have a hard time understanding and answering the questionnaire.

RESULTS AND DISCUSSIONS

This chapter deals with the results and discussion of the study according to the following sequence: (1) Present the extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in terms of Foundation Stage, Pivotal Stage and Sustainability Stage, (2) Describe the functionality level of the BADAC in the implementation of the Barangay Drug Clearing Program, (3) Describe the level of challenges encountered by the BADACs in the implementation of the Barangay Drug Clearing Program, and (4) Propose enhancement programs based on the findings of the study.

Sub-problem no. 1 Present extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental in terms of Foundation Stage.

Table 1 presents the extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental in terms of Foundation stage. The table shows the overall result is Highly Implemented with the mean score of 3.7.

Table 1

Extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita in terms of the Foundation Stage.

INDICATORS	PUNONG BRGY		C, OPERATIONS		C, ADVOCACY		BRGY SECRETARY		CSO REP		PNP BADAC FOCAL		DILG STAFF		ALL RESPONDENTS	
	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI
1. Classification of barangay according to drug affectation based on the presence of Person Who Uses Drugs (PWUDs), pushers, drug den maintainers, coddlers, protectors, financiers, cultivators, manufacturers and others, existence of illegal drug facilities and prevalence of illegal drug activities	3.7	HI	3.5	HI	3.3	HI	3.7	HI	3.7	HI	3.8	HI	3.6	HI	3.6	HI



2. Roll -out of Barangay Drug Clearing Program (BDCP) to Local government Units (LGUs) and stakeholders to enhance awareness on the guidelines and procedures of the program	3.9	HI	3.5	HI	3.8	HI	3.8	HI	3.7	HI	3.9	HI	3.6	HI	3.7	HI
3. Reactivation and Revitalization of Barangay Anti-Drug Abuse Council (BADAC)	4.0	HI	4.0	HI	4.0	HI	3.8	HI	3.7	HI	3.6	HI	3.8	HI	3.8	HI
4. Identification and consolidation of the list of suspected PWUDs, pushers, drug den maintainers, coddlers, protectors, financiers, cultivators, manufacturers and others by the BADAC.	4.0	HI	4.0	HI	3.5	HI	3.8	HI	3.5	HI	3.8	HI	3.7	HI	3.8	HI
AVERAGE WEIGHTED MEAN	3.9	HI	3.8	HI	3.7	HI	3.8	HI	3.7	HI	3.8	HI	3.7	HI	3.7	HI
3.7 HIGHLY IMPLEMENTED																

Data shows that all the respondents highly implement all the processes in the foundation stage having an overall mean score of 3.7 interpreted as highly implemented.

Based on the data shown it clearly shows that BADACs in the Municipality of Malita are highly implementing procedures in the foundation stage of the implementation of the BDCP and are all ready to continue with the next stage of the implementation which is the pivotal stage. BADACs headed by their respective Punong barangays as BADAC chairman as core implementers of the BDCP are well aware and are on the right track in their implementation thus resulting with a 100% declaration of its barangays as drug cleared barangays.

Sub-problem no. 2 Present extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental in terms of Pivotal Stage.

Table 2 presents the extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental in terms of Pivotal stage. The table shows the overall result is Implemented with the mean score of 3.4.



Table 2
Extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita in terms of the Pivotal Stage.

INDICATORS	PB		C, OPERATIONS		C, ADVOCACY		BRGY SECRETARY		CSO REPRESENTATIVE		PNP BADAC FOCAL		DILG STAFF		ALL RESPONDENTS	
	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI
1. Conducts house visits to identified PWUDs, and pushers to inform and convince them to undergo appropriate intervention programs.	3.9	HI	3.9	HI	3.5	HI	3.8	HI	3.6	HI	3.8	HI	3.7	HI	3.7	HI
2. Conduct of Anti-Illegal Drug Operations	3.4	I	2.6	I	2.3	LI	2.3	LI	2.0	LI	3.5	HI	2.2	LI	2.6	I
3. Conduct of demand reduction programs and other related activities.	3.8	HI	3.6	HI	4.0	HI	3.9	HI	4.0	HI	3.9	HI	3.8	HI	3.9	HI
4. Implementation of appropriate intervention programs for surrenderers.	3.9	HI	3.6	HI	4.0	HI	3.9	HI	3.8	HI	3.8	HI	3.9	HI	3.8	HI
5. Conduct of status monitoring of PWUD and pushers as to intervention undertaken.	4.0	HI	4.0	HI	3.6	HI	3.9	HI	3.7	HI	4.0	HI	4.0	HI	3.9	HI
6. Monitoring and accounting of the current circumstances of the PWUDs, pushers, drug den maintainers, coddlers, protectors, financiers, cultivators, manufacturers and others.	4.0	HI	4.0	HI	3.5	HI	3.7	HI	3.9	HI	3.9	HI	4.0	HI	3.9	HI
7. Deliberation and declaration of drug-cleared status for drug affected barangays, municipalities, cities and provinces by ROCBDC.	4.0	HI	4.0	HI	4.0	HI	4.0	HI	4.0	HI	4.0	HI	4.0	HI	4.0	HI
8. Deliberation on vetting and confirmation for drug fee status for drug unaffected barangays, municipalities, cities and provinces by ROCBDC.	1.0	NI	1.0	NI	1.0	NI	1.0	NI	1.0	NI	1.0	NI	1.0	NI	1.0	NI
AVERAGE WEIGHTED MEAN	3.5	HI	3.3	I	3.2	I	3.3	I	3.3	I	3.5	HI	3.3	I	3.4	I
3.4 IMPLEMENTED																



Findings of this study presents that in the implementation of the pivotal stage of the Barangay Drug Clearing Program only the Punong Barangay and the PNP BDCP focal person resulted with the highest extent of implementation which resulted with an overall result of highly implemented having mean scores of both 3.5. while the BADAC Chairman on Operations, Chairman on Advocacy, Barangay Secretaries, CSO Representative and the DILG Malita Staff follows next in the line with mean scores of 3.3, 3.2, 3.3, 3.3 and 3.3, respectively which are interpreted as Implemented.

Sub-problem no. 3 Present extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental in terms of Sustainability Stage.

Table 3 presents the extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental in terms of Sustainability stage. The table shows the overall result is Implemented with the mean score of 3.7.

Table 3

Extent of operations of the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita in terms of the Sustainability Stage.

INDICATORS	PB		C, OPERATIONS		C, ADVOCACY		BRGY SECRETARY		CSO REPRESENTATIVE		PNP BADAC FOCAL		DILG STAFF		ALL RESPONDENTS	
	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI
1. Conduct of social reintegration program for rehabilitated PWUDs and drug reformists	3.7	HI	3.5	HI	3.9	HI	3.9	HI	3.6	HI	3.8	HI	3.9	HI	3.8	HI
2. Conduct of Relapse prevention program for rehabilitated PWUDs.	3.7	HI	3.5	HI	3.8	HI	3.8	HI	3.6	HI	3.9	HI	3.8	HI	3.7	HI
3. Continuous implementation of drug free workplace program.	3.7	HI	3.4	I	3.4	I	3.4	I	3.5	HI	3.3	I	3.4	I	3.4	I
4. Conduct of active multi-sectoral support to BDCP implementation	3.9	HI	3.5	HI	3.7	HI	3.7	HI	3.8	HI	3.6	HI	3.5	HI	3.7	HI
5. Continuous capacity development for BDCP implementers	3.7	HI	3.5	HI	3.2	I	3.5	HI	3.2	I	3.3	I	3.6	HI	3.4	I
6. Establishment of community drug watch.	3.7	HI	3.5	HI	3.5	HI	3.5	HI	3.6	HI	3.8	HI	3.6	HI	3.6	HI
7. Establishment of community support group for drug problem	3.7	HI	3.7	HI	3.7	HI	3.7	HI	3.6	HI	3.8	HI	3.6	HI	3.7	HI
8. Institutionalization of BDCP implementation through issuances of ordinances, executive orders and policies.	3.9	HI	3.9	HI	3.9	HI	3.9	HI	3.5	HI	3.9	HI	3.9	HI	3.8	HI
9. Periodic consultation with duty bearers and stakeholders which includes holding of annual conference on BDCP implementation.	3.8	HI	3.8	HI	3.8	HI	3.8	HI	3.6	HI	3.8	HI	3.8	HI	3.8	HI
10. Continuous conduct of demand reduction activities.	3.7	HI	3.7	HI	3.9	HI	3.9	HI	3.8	HI	3.8	HI	3.9	HI	3.8	HI
11. Sustained intervention programs for PWUDs which include general intervention, community-based drug rehabilitation program and drug treatment rehabilitation program.	3.8	HI	3.5	HI	3.9	HI	3.9	HI	3.8	HI	3.8	HI	3.9	HI	3.8	HI



12. Sustained intervention program for qualified pusher.	3.7	HI	3.6	HI	3.5	HI	3.6	HI	3.6	HI	3.4	I	3.6	HI	3.6	HI
AVERAGE WEIGHTED MEAN	3.8	HI	3.6	HI	3.7	HI	3.7	HI	3.6	HI	3.7	HI	3.7	HI	3.7	HI
3.7 HIGHLY IMPLEMENTED																

Data shows that all the respondents highly implement all the processes in the sustainability stage having average weighted mean of 3.7 or Highly Implemented.

The successful implementation of the Barangay Drug Clearing Program pursuant to DDB Reg No. 4, series of 2021 not only lies in the efforts of the Department of Interior and Local Government (DILG), PNP, and PDEA. It relies upon active collaboration and cooperation with the LGU and other stakeholders. Its main character in the implementation of the BDCP is the role being handed to respective Barangay Anti-Drug Abuse Councils (BADAC) in each locality.

SOP number 2 Describes the functionality level of BADACs in the implementation of the Anti-Drug Clearing Programs through the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental.

Table 4 presents the functionality level of BADACs in the implementation of the Anti-Drug Clearing Programs through the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental. The table shows the overall result is Always interpreted as Highly Functional or Ideal with the mean score of 3.5.

Table 4

Functionality level of BADACs in the implementation of the Anti-Drug Clearing Programs through the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental.

INDICATORS	PB		C, OPERATIONS		C, ADVOCACY		BRGY SECRETARY		CSO REPRESENTATIVE		PNP BADAC FOCAL		DILG STAFF		ALL RESPONDENTS	
	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI
1. Attendance to training on Strengthening BADACs or other relevant training.	3.9	A	3.8	A	3.8	A	3.7	A	3.6	A	3.8	A	3.9	A	3.8	A
2. Attendance to any training or planning sessions on Community Support, Aftercare and Reintegration Program (CSAR).	3.8	A	3.5	A	3.8	A	3.8	A	3.6	A	3.9	A	3.8	A	3.7	A
3. Attendance to relevant training or orientations in the implementation of the Barangay Drug Clearing Program.	3.7	A	3.4	O	3.4	O	3.4	O	3.5	A	3.8	A	3.6	A	3.5	A
4. Conduct of BADAC of at least one (1) training for the BADAC House Cluster Leaders.	3.5	A	3.2	O	3.1	O	2.4	S	2.4	S	3.0	O	3.5	A	3.0	O
5. Conduct of BADAC of at least one (1) training for the BADAC Auxiliary Team (BAT).	3.6	A	3.5	A	3.2	O	3.5	A	3.2	O	3.7	A	3.6	A	3.5	A



6. Attendance of Barangay Duty Officers to at least one (1) training on the Community-Based Rehabilitation Program or other relevant training.	3.0	O	2.8	O	2.8	O	2.5	O	3.1	O	3.7	A	3.7	A	3.1	O
7. Attendance of BADAC secretary to relevant training in the implementation of the Barangay Drug Clearing Program.	3.7	A	3.7	A	3.7	A	3.4	O	3.6	A	3.8	A	3.6	A	3.6	A
8. Conduct of BADAC of at least one (1) consultative meeting with stakeholders.	3.9	A	3.9	A	3.9	A	3.9	A	3.5	A	3.9	A	3.9	A	3.8	A
9. Conduct of BADAC of regular monthly meetings.	3.8	A	3.8	A	3.8	A	3.8	A	3.6	A	3.8	A	3.8	A	3.8	A
10. Activities of BADAC to organize/co-organize at least two (2) community-based IEC campaign activities.	3.7	A	3.7	A	3.9	A	3.9	A	3.8	A	3.0	O	3.2	O	3.6	A
11. Activities of BADAC to organize/co-organize at least one (1) school-based IEC campaign activity.	3.8	A	3.5	A	3.9	A	3.9	A	3.8	A	3.1	O	3.0	O	3.6	A
12. Conduct of any Civil Society Organizations (CSOs) of at least one (1) drug awareness campaign activity in the barangay.	3.7	A	3.6	A	3.5	A	3.6	A	3.6	A	3.4	O	3.6	A	3.6	A
13. Activities of BADAC to organize/co-organize any activities in observance of the International Day Against Drug Abuse and Illicit Trafficking (IDADAIT).	2.9	O	2.5	O	2.6	O	3.5	A	2.9	O	3.2	O	2.8	O	2.9	O
14. Activities of BADAC to organize/co-organize any activities in observance of the Drug Abuse Prevention and Control Week (DAPC).	3.0	O	2.6	O	2.5	O	3.3	O	3.0	O	3.1	O	3.0	O	2.9	O
15. Submission of BADAC of an updated number of residents who surrendered through the Barangay Duty Officers and other mandated agencies.	3.9	A	3.8	A	3.8	A	3.5	A	3.6	A	3.1	O	3.5	A	3.6	A
16. Submission of BADAC of an updated number and status of residents who were assessed, enrolled and/or have completed any Wellness and Recovery Interventions.	3.8	A	3.8	A	3.8	A	3.4	O	3.5	A	3.0	O	3.7	A	3.6	A
17. Submission of BADAC of an updated number of residents enrolled and/or completed in CSAR or any equivalent reintegration program.	3.8	A	3.8	A	3.8	A	3.4	O	3.5	A	3.0	O	3.7	A	3.6	A
18. Submission of BADAC of a Summary of Consolidated Information Report (CIR).	3.8	A	3.7	A	3.6	A	3.8	A	3.5	A	3.8	A	3.8	A	3.7	A
19. Preparation of BADAC of its own BADAC Plan of Action (BADPA) for FY 2022.	4.0	A	4.0	A	4.0	A	4.0	A	3.6	A	3.7	A	3.8	A	3.9	A
20. Appropriation of BADACs of a substantial budget for its anti-illegal drug activities for FY 2022.	4.0	A	4.0	A	4.0	A	4.0	A	3.7	A	3.8	A	3.7	A	3.9	A



AVERAGE WEIGHTED MEAN	3.7	A	3.5	A	3.5	A	3.5	A	3.4	O	3.5	A	3.6	A	3.5	A
3.5 ALWAYS (HIGH FUNCTIONAL OR IDEAL)																

Data shows that all the Punong Barangays has the highest mean score of 3.7 (Always) interpreted as High Functional or ideal in the implementation of the Barangay Drug Clearing Program, followed by DILG Malita Staff with mean score of 3.6 (Always), Next are the groups of the Chairman on Operations, Chairman on Advocacy, Barangay Secretary and PNP Focal Person with mean scores of 3.5 all interpreted as Highly Functional, and lastly the group of CSO with mean score of 3.4 (Often) interpreted as Moderate Functional or Progressive.

SOP number 3 Describes the level of challenges encountered by the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental.

Table 5 presents the level of challenges encountered by the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental. The table shows the overall result is Often Encountered with the mean score of 2.7.

Table 5

Challenges encountered by the BADACs in the implementation of the Barangay Drug Clearing Program in the Municipality of Malita, Davao Occidental

INDICATORS	PB		C, OPERATIONS		C, ADVOCACY		BRGY SECRETARY		CSO REPRESENTATIVE		PNP BADAC FOCAL		DILG STAFF		ALL RESPONDENTS	
	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI	MEAN	VI
1. Less cooperative members of the Community in the implementation of Barangay Drug Clearing Program (BDGP).	2.3	SE	3.0	OE	3.2	OE	3.6	AE	2.1	SE	3.7	AE	2.4	SE	2.9	OE
2. Lack of awareness on Barangay Drug Clearing Program (BDGP).	2.2	SE	3.2	OE	2.1	SE	3.5	AE	2.0	SE	3.5	AE	2.6	OE	2.7	OE
3. Lack of qualifications of the members of the BADAC to conduct lectures on drug abuse	3.9	AE	3.6	AE	3.5	AE	3.8	AE	3.0	OE	3.5	AE	3.6	AE	3.6	AE
4. BADAC is not fully functional.	1.4	NE	1.5	SE	1.6	SE	2.0	SE	1.4	NE	2.0	SE	1.5	SE	1.6	SE
5. Lack of adequate support from the community	3.0	OE	3.2	OE	3.1	OE	3.9	AE	2.9	OE	3.5	AE	3.0	OE	3.2	OE
6. Lack of adequate support from the religious sector	2.0	SE	1.9	SE	1.5	SE	1.3	NE	1.9	SE	3.0	OE	1.9	SE	1.9	SE
7. Lack of adequate support from the business sector	2.0	SE	1.8	SE	1.6	SE	1.5	SE	1.6	SE	2.5	OE	2.0	SE	1.9	SE
8. Lack of adequate support from the Philippine National Police	1.6	SE	1.4	NE	1.2	NE	1.8	SE	1.3	NE	1.0	NE	2.0	SE	1.5	SE
9. Lack of adequate support from the parents' sector	3.2	OE	3.5	AE	3.4	OE	3.3	OE	3.0	OE	3.5	AE	3.6	AE	3.4	OE
10. Lack of adequate support and participation from the youth sector	2.5	OE	2.4	SE	2.2	SE	2.0	SE	1.5	SE	2.0	SE	1.5	SE	2.0	SE



11. Lack participation and interest from the clients or Persons Who Used Drugs (PWUDs)	3.8	AE	3.5	AE	3.3	OE	3.8	AE	3.0	OE	3.5	AE	3.2	OE	3.4	OE
12. Inadequate personnel for BADAC	4.0	AE	3.8	AE	3.6	AE	3.8	AE	2.7	OE	3.6	AE	3.5	AE	3.6	AE
13. Members of the BADAC are not community service-oriented	1.6	SE	1.9	SE	2.0	SE	2.5	OE	2.1	SE	2.9	OE	1.5	SE	2.1	SE
14. Complacency on the part of the duly authorized personnel	1.5	SE	1.7	SE	1.8	SE	2.0	SE	1.5	SE	2.0	SE	1.9	SE	1.8	SE
15. Indifference of members to drug-related problems	1.0	NE	1.5	SE	1.4	NE	1.5	SE	1.0	NE	1.2	NE	1.3	NE	1.3	NE
16. Lack of awareness of the BADACs functions and responsibilities	2.4	SE	2.5	OE	2.8	OE	2.3	SE	1.7	SE	2.6	OE	2.4	SE	2.4	SE
17. Non-attendance to seminars or training relative to their functions and responsibilities	1.8	SE	2.3	SE	2.5	OE	2.8	OE	2.0	SE	2.9	OE	2.7	OE	2.4	SE
18. Poor orientation of the BADACs functions and responsibilities	2.0	SE	2.5	OE	2.7	OE	3.0	OE	2.4	SE	3.5	OE	2.6	OE	2.7	OE

19. Feeling of fear to encourage influential drug personalities to undergo community-based rehabilitation program	3.1	OE	3.5	AE	2.7	OE	3.6	AE	1.9	SE	3.6	OE	2.5	OE	3.0	OE
20. Failure to report any knowledge regarding illegal drugs because of fear for their life or family	3.5	AE	3.8	AE	3.7	AE	3.7	AE	3.1	OE	3.5	OE	3.4	AE	3.5	AE
21. Failure to report any knowledge regarding illegal drugs because the involved personality is influential or high ranking official in the community	1.5	SE	1.3	NE	1.1	NE	1.2	NE	1.0	NE	1.6	SE	1.5	SE	1.3	NE
22. BADAC member/s is related to the person/s involved in illegal drugs	1.8	SE	1.5	SE	1.4	NE	1.5	SE	1.2	NE	1.9	SE	1.7	SE	1.6	SE
23. Lack of interest of the PWUDs to undergo community-based rehabilitation program	3.8	AE	3.9	AE	3.8	AE	3.8	AE	3.5	AE	3.9	AE	4.0	AE	3.8	AE
24. Lack of substantial funds for the implementation of anti-drug campaigns.	2.1	SE	3.0	OE	3.1	OE	3.1	OE	1.8	SE	3.0	OE	3.5	AE	2.8	OE
25. The LGU is incapable of establishing Balay Silangan due to inadequate funds.	3.4	OE	3.2	OE	3.2	OE	3.5	AE	2.7	OE	3.0	OE	3.6	AE	3.2	AE
26. Intervention programs are not given to all qualified individuals due to budget concern.	3.5	AE	3.8	AE	3.5	AE	3.6	AE	2.3	SE	3.6	AE	3.7	AE	3.4	OE



27. Transfer of identified individuals listed in PDEA PNP CBWL to other barangay is affecting the monitoring of the same.	3.9	AE	3.9	AE	3.8	AE	3.8	AE	3.6	AE	4.0	AE	3.6	AE	3.8	AE
28. There is a delay in the application for the declaration of drug cleared status of the barangay due to lack of supporting documents submitted.	3.9	AE	4.0	AE	3.9	AE	3.9	AE	2.8	OE	4.0	AE	3.9	AE	3.8	AE
29. Surveillance drug tests are not done to all rehabilitated PWUDs and drug reformists.	3.9	AE	3.8	AE	3.8	AE	3.8	AE	2.9	OE	4.0	AE	3.8	AE	3.7	AE
30. Relapse cases for rehabilitated PWUDs.	2.0	SE	1.3	NE	2.0	SE	2.1	SE	1.9	SE	2.0	SE	3.2	OE	2.1	SE
31. Reinvolverment of reformists in illegal drug activities.	1.6	SE	1.2	NE	1.4	NE	1.6	SE	1.7	SE	2.2	SE	3.0	OE	1.8	SE
32. Lack of sustainability in drug supply and demand reduction strategies.	2.8	OE	2.5	OE	2.6	OE	3.0	OE	2.7	OE	2.8	OE	3.6	AE	2.9	OE
33. Remaining stigma for rehabilitated PWUDs and drug reformists.	2.4	SE	2.5	OE	3.4	OE	3.5	AE	2.3	SE	2.6	OE	2.8	OE	2.8	OE
34. Increase of crime incidence	1.3	NE	1.4	NE	2.0	SE	2.1	SE	1.4	NE	2.0	SE	2.1	SE	1.8	SE
35. Non-compliance to Drug-Free Workplace Program.	2.9	OE	3.0	OE	3.3	OE	3.4	OE	2.8	OE	2.6	OE	3.5	OE	3.1	OE
AVERAGE WEIGHTED MEAN	2.6	OE	2.7	OE	2.6	OE	2.8	OE	2.2	SE	2.9	OE	2.8	OE	2.6	OE
2.6 OFTEN ENCOUNTERED																

Data shows that the PNP BADAC focal persons have the highest mean score of 2.9 verbally described as Often Encountered and interpreted as that they often encounter enumerated problems during the implementation of the Barangay Drug Clearing Program. Followed by DILG Malita Staff and Barangay Secretary with mean scores of 2.8 (Often Encountered), Next is the group of Chairman on Operations with mean score of 2.7 (Often Encountered), then the group of Chairman on Advocacy and the Punong Barangay with mean scores of 2.6 (Often Encountered) and lastly, the group of the CSO representatives with mean score of 2.2 verbally described as Seldom Encountered and interpreted as that this group seldom encountered problems during the implementation of the Barangay Drug Clearing Program.

The challenges encountered by implementers of the BDCP vary from each barangay, city/municipality or province, the PDEA hand in hand with the DILG, PNP, LGU and other stakeholders are committed to somehow address these issue and implement programs in the BDCP more effectively and efficiently to better serve its clients and achieve the purpose of the BDCP.

SOP number 4 Presents proposed enhancement programs based on the finding of this study in the SOP 1- 3.

Table 5 enumerates proposed enhancement programs identified to be necessary to be implemented by BADACs to address problems encountered during the implementation of the Barangay Drug Clearing Program to be able to enhance and sustain their accomplishments in the program.



Table 5

Proposed enhancement programs in the implementation of the Barangay Drug Clearing Program

Activities and/or Problems Encountered in every SOP	Proposed Enhancement Programs	Objectives	Office/r Primary Responsible (OPR)
<p>SOP 1 BADACs implementation on the pivotal stage of the continuous conduct of anti-illegal drugs operations</p> <p>In the sustainability stage, BADACs should realize the importance of establishing/creating a Drug-Free Workplace Program Policy.</p>	<p>Conduct orientations and/or seminars to BADAC members and other Elected Barangay Officials of their role in every anti-illegal drug operations conducted by law enforcement officers</p> <p>Conduct orientations and workshop/writeshop in drafting the Drug Free workplace program policy in every barangay</p>	<p>BADACs should be knowledgeable of their essential roles and responsibility in the conduct of anti-illegal drug operations, especially during the conduct of physical inventory of seized drug and non-drug evidence</p> <p>To boost the morale of implementers and to be sure that no one among the implementers are using illegal drugs.</p>	<p>Punong Barangays, DILG, and LGU-MADAC/PADAC in collaboration with the PNP, PDEA and local prosecutors office</p> <p>DILG and LGU-MADAC/PADAC</p>
<p>SOP 2 The conduct of training to all BADAC house cluster leaders and Barangay Duty Officers resulted to “often” conducted</p> <p>Celebration of the International Day Against Drug Abuse and Illicit Trafficking (IDADAIT) and Drug Abuse Prevention and Control Week (DAPC)</p>	<p>Conduct trainings and orientation to BADAC house cluster leaders</p> <p>Conduct drug abuse prevention and education lectures and seminar in celebration of IDADAIT and DAPC</p>	<p>-To orient and train BADAC house cluster leaders on their functions and be able to come up with effective strategies to carry out their purpose</p> <p>To sustain efforts in the implementation of the Barangay Drug Clearing Program, BADAC should continue to conduct lectures to educate not only individuals who have been victims of illegal drugs but also to prevent individuals to be curious and be tempted to try using illegal drugs</p>	<p>DILG and LGU - MADAC/PADAC</p> <p>BADAC chairman on advocacy, SK and school principals</p>



<p>SOP 3</p> <p>-Lack qualifications of the members of the BADAC to conduct lectures on drug abuse</p> <p>-Inadequate personnel of BADAC</p> <p>-There is a delay in the application for the declaration of drug cleared status of the barangay due to lack of supporting documents submitted</p> <p>-Failure to report any knowledge regarding illegal drugs because of fear for their life or family</p> <p>-Lack of interest of PWUDs to undergo-community based rehabilitation programs.</p> <p>-Surveillance drug tests are not done to all rehabilitated PWUDs and drug reformists</p> <p>-Transfer of identified individuals listed in PDEA/PNP CBWL to other barangay is affecting the monitoring of the same</p> <p>-LGU is incapable of establishing Balay Silangan due to inadequate funds</p>	<p>-Conduct Trainers' Training</p> <p>-Conduct capacity development programs, including orientations in using devices, such as laptops and cameras</p> <p>-Prioritize confidentiality of informants as well as divulged information to each BADAC</p> <p>-Maintain updated data on status of PWUDs always remind them of the importance of their cooperation in the success of the program to help them become productive individuals</p> <p>-Seek assistance from higher ADACs</p>	<p>-BADAC Chairman on Advocacy should attend trainers' training on the conduct of anti illegal drug abuse lectures to become force multipliers in the conduct of sustainability activities</p> <p>-Conduct necessary training for capacity development programs which will boost functionality of each member of the BADAC and equip them to do multi tasking activities</p> <p>-Educate BADACs of the consequences of leaking confidential information and conduct seminars orienting BADACs of the roles and responsibilities in securing confidentiality of their data</p> <p>-Always monitor PWUDs and continuously conduct meetings and/or dialogues with them and engage them in activities in the barangay</p> <p>-To be able to establish an operational Balay Silangan, municipalities should always coordinate and seek assistance from higher ADACs</p>	<p>-BADAC, LGU and DILG</p> <p>-LGUs (BADAC, MADAC, PADAC)</p> <p>-BADAC and PNP</p> <p>BADAC and other BDCP implementers</p> <p>LGUs and other ADACs</p>
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Outcome of the Study

RECLAIMING COMMUNITIES: EVALUATING THE BARANGAY DRUG CLEARING PROGRAM'S IMPACT ON SUBSTANCE ABUSE ERADICATION IN MALITA, DAVAO OCCIDENTAL

1. This study revealed that the extent of the implementation of the BADAC in the stage of the BDCP is highly implemented in the foundation and sustainability stage while the pivotal stage is implemented. This connotes that
2. BADAC are more functional from the start of the processes of the BDCP and continue to implement and function to the best of their abilities to sustain the accomplishments they had in the earlier stage of the implementation.
3. The study revealed that during the implementation of the three (3) stages of the BDCP, the BADACs were highly functional in implementing the processes of the BDCP, and they performed their duties and responsibilities despite the challenges they faced during the implementation.
4. This study has revealed that BADACs often face challenges or problems during the implementation of the BDCP. The constant communication, cooperation, and collaboration of all stakeholders in the implementation of the BDCP has been a great factor in addressing certain challenges.
5. Lastly, this study revealed that despite being highly functional and successful in implementing the BDCP, there will still be challenges that implementers will face in their continuous implementation of the program. All BDCP implementers should always work harmoniously in the implementation of the program to achieve a successful outcome and must work accordingly as a whole-nation approach.

CONCLUSION AND RECOMMENDATIONS

The BADACs and other implementers of the BDCP in the municipality of Malita are all competitive and passionate in their roles in the successful implementation of the BDCP. The cooperation and collaboration among all implementing agencies is vital in the successful implementation of the program since the BDCP is designed and anchored in the sense of BAYANIHAN in the Philippines.

Based on the findings of this study, the researcher concludes and recommends the following:

1. Conduct of training sessions, seminars, orientations, re-orientations, and similar events will assist BADACs in maintaining excellent service delivery and preserve the drug-free status of both their barangays and the Municipality of Malita. Also, to convey to the community that the Barangay Drug Clearing Program (BDCP) is not just about supporting those who have been harmed by illegal drugs, but also about preventing people from engaging in illicit drug use and activities. The PDEA, the DILG, and other stakeholders should

support and encourage the conduct of the BDCP to guarantee its appropriate and successful implementation and execution.

2. Even though the Barangay Drug Clearing Program (BDCP) in the municipality of Malita is well implemented from the foundation stage to the sustainability stage, strategies and activities that would sustain BADAC's effectiveness and competitiveness are still required. These include capacity development programs, trainings, and orientations for all BADAC force multipliers. To ensure that the BDCP's efforts in the war on drugs are successful, implementers should collaborate well and build a sense of camaraderie when creating programs pertaining to supply and demand reduction tactics.
3. The lack of logistical requirements was presented as one of the problems that hindered the program from reaching its full capacity. BADACs together with PNP BADAC focal persons to regularly conduct evaluation and monitoring of all PWUDs in every barangay so that implementers are aware of their status and be able to come up with suitable strategies and programs for the benefit of all their PWUDs. They are highly advised to maintain transparency and accuracy with all matters regarding the Drug Watch List. Further, the Municipality of Malita is optimistic to take measures to maintain their high functionality in terms of the implementation of the Barangay Drug Clearing Program.
4. Even with the success that the municipality has accomplished in the implementation of the BDCP there were still flaws and challenges that the municipality has encountered and endured. The researcher further concludes that despite all challenges and flaws of any program being implemented it will still be implemented successfully if its implementers are devoted and passionate about what they are doing and are positively looking at the betterment of its community and its constituents and to review and present other suitable strategies to further improve the implementation of the Barangay Drug Clearing Program and be able to sustain benefits of being a drug free/cleared community.
5. Lastly, for future researchers to conduct more study on the underlying problems encountered by other communities in the implementation of BDCP. We learn not by others' mistakes but by others' experiences to develop resilience and be able to address the menace brought by illegal drugs to every community not only in our province here in Davao Occidental but also in other communities in this country.

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A CROSS-SECTIONAL STUDY ON VISUAL OUTCOME AFTER CATARACT SURGERY IN NORTHERN INDIA: AN INDIAN PERSPECTIVE

Ragni Kumari¹, Salal Khan², Sunil Kumar Gupta³, Jamshed Ali⁴, Ramlah Akhtar⁵,
Vishwdeep Mishra⁶, Rajiv Janardhanan⁷

^{1,2,3,4,5,6}Department of Optometry (E.I.A.H.S. & R.), Era University, Lucknow, U.P, India.

⁷Faculty of Medical & Health Sciences, SRM Institute of Science & Technology, Kattankulathur, Tamil Nadu, India.

Corresponding Author-Salal Khan, Assistant Professor, Department of Optometry (E.I.A.H.S. & R.), Era University, Lucknow, U.P, India.

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ABSTRACT

Purpose: The main purpose of this study is to determine the visual outcomes and satisfaction among the old age patients after cataract surgery in Northern India.

Methodology: It was a cross sectional study conducted to estimate the visual outcomes after cataract surgery. It includes 9023 (mean age: 55±2.51) participants (Male-4848 & Female-4175). The participants underwent a comprehensive eye examination and information on the patient's lifestyle, chief complaints, socioeconomic status, occupations; systemic diseases were collected using a self-structured questionnaire. The included data were analyzed to explore the visual outcomes and patient's satisfaction using the Pearson Chi-square test for each factor through SPSS version 21.

Results: Out of 9023 individuals enrolled in the study, 6370 were diagnosed having cataract (a vast majority of patients had cortical cataract (66.2%), followed by nuclear (27.1%) and a small number (6.6%) of posterior subcapsular cataract) and 3372 were found fit for cataract surgery. However only 3156 patients underwent surgery. A vast majority of the patients (80.8%) with the best correction achieved a good visual outcome, followed by a borderline visual outcome (12.9%). Poor visual outcome was seen only in 6.4% cases.

All parameters were found to be statistically significant with the Pearson Chi-square test. A p-value of <0.05 was considered as significant.

Conclusion: WHO criteria fulfilled the visual outcome after cataract surgery in this study. In this study, age, surgical methods, ocular co-morbidities, pre and post-operative complications were associated with a poor visual outcome i.e. 6.4%.

KEYWORDS: Visual Outcome, Cataract Surgery, Eye-Care, Optometry, Public Health

INTRODUCTION

In many nations, including India, visual impairment and blindness are public health issues. The most widely recognized cause of blindness is cataract, followed by glaucoma, diabetic retinopathy, refractive errors, conjunctivitis, and childhood blindness (WHO).

Worldwide, visual impairment is a significant financial burden: The World Health Organization estimates that vision impairment costs \$411 billion annually in lost production (WHO, 2022).

According to recent global data, 82% of people who are blind and 65% of people who are visually impaired are over the age of 50. The two most common causes of visual impairment, according to the WHO (WHO, 2022) are cataracts (33%), and uncorrected refractive errors (43%)

Near- or far-sightedness affects at least 2.2 billion people around the world. One billion, or nearly half of these cases, involved visual loss that either needed to be corrected or could have been avoided.

As part of the global initiative VISION 2020, WHO is collaborating closely with member states and partners to eliminate preventable causes of blindness by developing and implementing comprehensive national eye care.

The Expert Group on Sight Loss conducted research and found that very significant progress had been made by 2010, when the number of blind people had decreased to 32 million. The age-specific prevalence decreases of 42% was even more significant, demonstrating that we can make a significant difference by following our instincts. The site WHO fostered a worldwide activity plan in 2013 proposing to lessen preventable visual deficiency by 25% by 2019 (WHO, 2022).

Age-related or senile cataract is the leading cause of adult visual impairment worldwide (65%). Depending on the availability of ophthalmic services, affordability, and the general public's knowledge of the field, causes can vary greatly from country to country. Contrasted with big league salary nations, the extent of visual weakness brought about by cataract is higher in low- and center pay countries. In countries with high incomes,



glaucoma and age-related macular degeneration (ARMD) are more common. Genet, 2022).

A significant global issue of the 21st century is cataract (NPCB, DGH, MFFW, Government). India in 2019). In India, cataracts are responsible for 66.2% of adult blindness, 80.7% of severe visual impairment, and 70.2% of moderate visual impairment. Expanding individuals' age, they are bound to get cataracts. As the world's population ages, cataract-related blindness and vision loss are rising (Fatoye, 2021).

A cataract is a condition in which the transparency and opacity of the lens decrease. The most common cause of preventable blindness and visual impairment worldwide is cataracts.

Treatment of cataract comprises of its careful evacuation. The normal surgeries used to treat cataract are intracapsular cataract extraction (ICCE) and extracapsular cataract extraction (ECCE). Be that as it may, certain non-careful measures might be useful until cataract surgery is performed.

The technical procedures of cataract surgery have improved over the past ten years as a result of a variety of changes and advancements. This has resulted in the switch from traditional intracapsular cataract extraction to small incision cataract surgery and phacoemulsification with the implantation of an intraocular lens (IOL). There are benefits and drawbacks to each method of surgery, and the success of cataract surgery depends on which method is used. The choice of the appropriate method determines the outcome of cataract surgery. The surgeon's skill and level of comfort are all factors that influence the choice of technique (Matta et al., 2016).

Despite numerous technological advancements, the clinical outcomes of cataract surgery in low- and middle-income countries (LMICs) range from 11.4% to 44%, which is substandard. Only a few of these studies focused on metropolitan areas, while the majority of them included rural areas or a mix of urban and rural residents. Not many of these investigations were metropolitan, while the larger part included rustic regions or a blend of metropolitan and provincial occupants. Due to India's size and significant regional disparities in treatment and outcomes, both regional and national plans and programs are required to improve the outcomes of cataract surgery and provide community-specific ophthalmic services. Matta and others, 2016).

There are no methodical examinations in the accessible writing for northern India that correlatespecificrisk factors with visual outcome after a cataract surgery to accomplish 100 percent visual outcomes.

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The clinical outcomes of cataract surgery in low- and middle-income countries (LMICs) range from 11.4% to 44%, which is substandard despite all the technical developments. Most of these studies included rural areas or a mix of urban and rural residents, while only a few focused on metropolitan areas. Few of these studies were urban, while the majority featured rural areas or a mix of urban and rural inhabitants. Regional and national plans and programs are required in India to provide community-specific ophthalmic services and enhance the outcomes of cataract surgery because of the nation's size and the significant regional inequalities in treatment and outcomes. (Matta et al., 2016).

There are no systematic studies in the available literature for northern India that correlate specific risk factors with visual outcomes after cataract surgery to achieve 100% visual outcomes. In attempting to address the lacunae in available information. I took up the study titled "risk factors for poor Visual Outcome of cataract surgery in rural and urban population of Central Uttar Pradesh"

METHODOLOGY

The study was conducted at Era Lucknow Medical College and Hospital, Lucknow, Uttar Pradesh, from January 2019 to July 2022 after obtaining prior institutional ethical clearance from Era University and advertising informed consent forms to the participants enrolled in the study. Because of the paucity of

data-based comparative evaluation of post-cataract surgery visual outcome; cataract surgical coverage (CSC); age-specific cataract surgical rate (CSR) in Uttar Pradesh in available literature; work was taken up with the aim to assess and evaluate the risk factors for post-surgery visual outcome in senile cataract among urban and rural population in Central Uttar Pradesh. The study design is Observational, Analytic, and longitudinal study. Adult patients in the age group 50 years and above regardless of gender and population background (urban/rural); having senile cataract and have been operated in the department of ophthalmology Era Lucknow Medical College, Lucknow. A standard pretest questionnaire on the patient's demographic profile and degree of visual handicap was administered.

In this review, measurable dissections were performed utilizing SPSS (Factual Bundle for Sociologies) IBM Corp. Delivered 2017. Version 23.0 of IBM SPSS Statistics for Windows. NY,

Armonk: IBM Corporation - All analyses were tested using two-sided hypothesis tests, and a p value of less than 0.05 was assumed to indicate significance. The statistical hypothesis was tested using the chi-square (2) test.

RESULTS

The findings of present study are based on the observation made on 9023 individuals enrolled in the study. The study duration was three and half years, spanning from January 2019 to July 2022. The subjects were recruited to the study after obtaining the IEC approval from Era University. Ensuring the voluntary participation of subjects in the study after advertising inform consent forms. Of 9023 individuals enrolled in the study, 6370 were diagnosed having cataract and 3372 were found fit for cataract surgery. However only 3156 patients underwent surgery (Fig1).

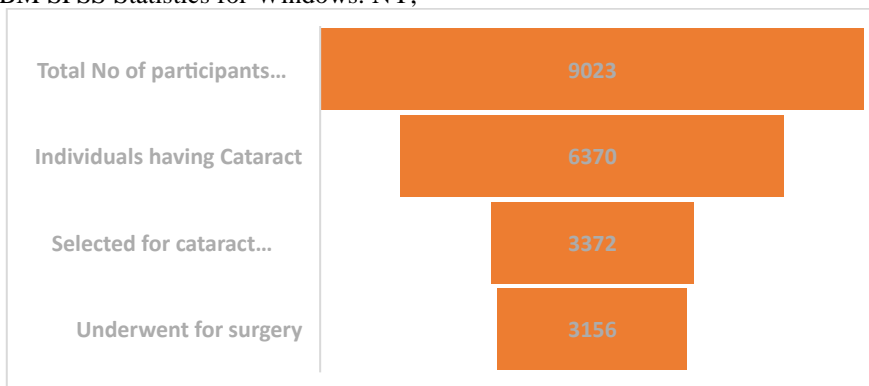


Figure 1

Out of total 6370 participants of cataract, a vast majority of patients had cortical cataract (66.2%), followed by nuclear (27.1%) and a small number (6.6%) of posterior subcapsular cataracts (fig 2).

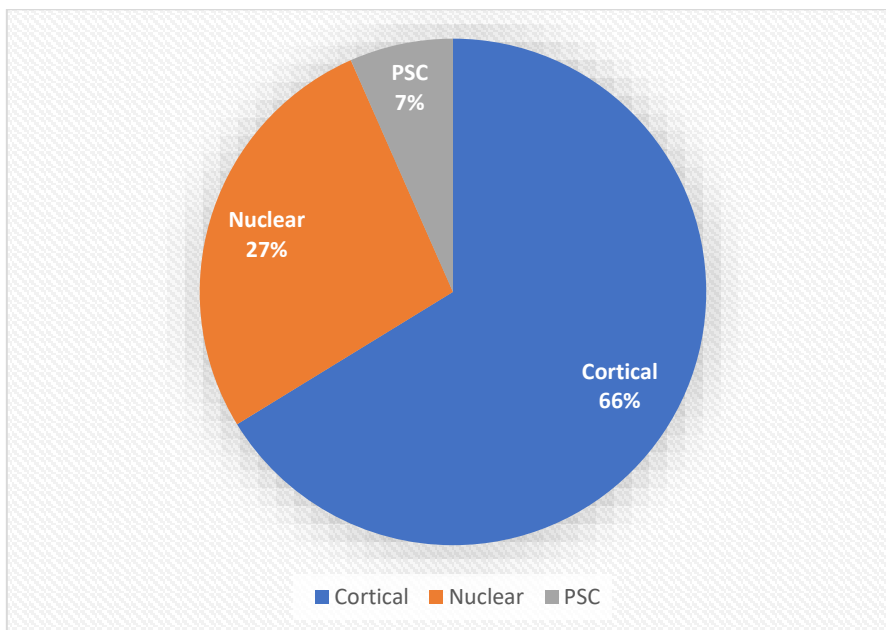


Fig: 2: Clinical presentation of cataract among the study subject



A. SOCIO-DEMOGRAPHIC PROFILE

All the subjects enrolled in the study were adults the age of 50 years or above, regardless of gender and demographic settings. Out of the total 9023 enrolled in the study, only 3348 (37.1%) were from rural while 5675 (62.9%) were from urban backgrounds. The urban population outnumbered the rural population, probably because of the urban setting of the place of study. Overall gender distribution showed male (4848) subjects outnumbered female (4175) subjects enrolled in the study. A similar pattern of gender distribution is reflected in both rural and urban participant populations individually (Table 4.1).

The majority of the participant was aged 50-60 years (7015), and as the age group advanced number of participants was reciprocally proportional. The majority of subjects enrolled in the study from the urban areas reported comparatively at a younger age in contrast to those from rural backgrounds. Most of the subjects from the urban areas were aged between the ages 50-60 years, while the subjects from the rural areas were between age 60-80 (Table 4.1).

The working background of the 9023 individuals was almost evenly distributed; 4784 (53%) worked indoors, while 4239 (47%) worked outdoors. Working hours of eight hours or more per day in a particular environment were taken as criteria for labeling an individual as an indoor and outdoor worker. Analysis revealed that a smaller number of indoor workers (46.9%) were from rural areas compared to those from urban areas (53.1%). Among those subjects working outdoors, 26.1% were from rural areas, and 73.9% were from urban areas (Table 4.1).

The majority of the participants (80%) did not have any history of addiction. Only 12% consumed smokeless tobacco (nonsmokers) products, 7% were habitual smokers, and 1% to alcohol (Table 4.1). Addiction was more common in the participants from rural backgrounds. All the alcoholics and smokers were from rural areas, along with the tobacco chewers (57.4%) (Table 4.1).

Most of the participants enrolled in the study belonged to the upper socioeconomic class (72%), followed by the lower (18%) and middle class (10%). When the urban and rural background was further elaborated, it revealed that in the upper socioeconomic group, the majority of the patients were from urban areas (87.3%), while all the participants from rural backgrounds were from middle and lower socioeconomic classes (100%) (Table 4.1).

The majority of the participants were free of any associated systemic disease (80.7%), and only a small percentage of them had Diabetes Mellitus (DM) (8.8%), hypertension (HTN) (8.4%), DM with HTN (0.6%) and others (1.6%). Patients with systemic diseases were mainly from rural backgrounds (Table 4.1).

The majority of participants were free of any other ocular diseases (90.9%). Associated ocular diseases among participants included diabetic retinopathy (DR) (6%), hypertensive retinopathy (HTR) (1.5%), and others (1.6%) (Table 4.1).

Table 4.1: Sociodemographic profile of participant enrolled in the study

Sociodemographic profile	Background		Total
	Rural	Urban	
Gender			
Female	1656	2519	4175
	39.7%	60.3%	100.0%
Male	1692	3156	4848
	34.9%	65.1%	100.0%
Total	3348	5675	9023
	37.1%	62.9%	100.0%
Age			
50-60	1980	5035	7015
	28.2%	71.8%	100.0%
61-70	1018	434	1452
	70.1%	29.9%	100.0%
71-80	328	164	492
	66.7%	33.3%	100.0%
81-90	22	42	64
	34.4%	65.6%	100.0%
Total	3348	5675	9023
	37.1%	62.9%	100.0%
Occupation			
Indoor	2243	2541	4784
	46.9%	53.1%	100.0%
Outdoor	1105	3134	4239
	26.1%	73.9%	100.0%
Total	3348	5675	9023



	37.1%	62.9%	100.0%
Addiction			
None	1998	5224	7222
	27.7%	72.3%	100.0%
Alcohol	117	0	117
	100.0%	0.0%	100.0%
Smoking	626	0	626
	100.0%	0.0%	100.0%
Tobacco	607	451	1058
	57.4%	42.6%	100.0%
Total	3348	5675	9023
	37.1%	62.9%	100.0%
Socioeconomic Status (SES)			
Upper Class	822	5675	6497
	12.7%	87.3%	100.0%
Middle Class	940	0	940
	100.0%	0.0%	100.0%
Lower Class	1586	0	1586
	100.0%	0.0%	100.0%
Total	3348	5675	9023
	37.1%	62.9%	100.0%
Associated Systemic Disease (ASD)			
Nil	1616	5663	7279
	22.2%	77.8%	100.0%
DM	794	2	796
	99.7%	.3%	100.0%
HTN	748	6	754
	99.2%	.8%	100.0%
DM+HTN	50	0	50
	100.0%	0.0%	100.0%
Others	140	4	144
	97.2%	2.8%	100.0%
Total	3348	5675	9023
	37.1%	62.9%	100.0%
Associated eye disease (AED)			
Nil	2538	5667	8205
	30.9%	69.1%	100.0%
DR	530	8	538
	98.5%	1.5%	100.0%
HTR	134	0	134
	100.0%	0.0%	100.0%
Others	146	0	146
	100.0%	0.0%	100.0%
Total	3348	5675	9023
	37.1%	62.9%	100.0%

B. POST OPERATIVE VISUAL OUTCOME

Following cataract surgery at 6-week follow-up, based on presenting visual acuity(PVA), a vast majority of the patients (80.8%) with the best correction achieved a good visual

outcome, followed by a borderline visual outcome (12.9%). Poor visual outcome was seen only in 6.4% cases. This result was statistically significant ($p < 0.001$) (Table 4.38).

Table 4.38: Post-operative Visual Outcome after cataract surgery

Visual Outcome		
Good (0)	2549	80.8
Borderline (1)	406	12.9
Poor (2)	201	6.4
Total	3156	100.0



1. Post operative visual outcome vs. Population background

Over all post-operative visual outcome in the study group individuals was good, regardless of their background (urban

and rural). However, the cases with poor outcome were more in the rural population in comparison to the urban group (8.1% rural and 0.3% urban). This result was also statistically significant (p=0.001) (Table 4.39).

Table 4.39: Post-surgical visual outcome among population background

Background	Visual Outcome			Total	p value
	Good	Borderline	Poor		
Rural	1938	310	199	2447	<0.001
	79.2%	12.7%	8.1%	100.0%	
Urban	611	96	2	709	
	86.2%	13.5%	0.3%	100.0%	
Total	2549	406	201	3156	
	80.8%	12.9%	6.4%	100.0%	

2. Visual outcome vs Patients Age

Post-operative visual outcome, though good in majority of the cases yet,

declined significantly with increasing age. The best outcome was achieved in the age group of 50-60 and 61-70 years of age (Table 4.40). This result is statistically significant (p<0.001)

Table 4.40: Postoperative visual outcome Vs. patient's age.

Age	Visual Outcome			Total
	Good	Borderline	Poor	
50-60	1534(86.1%)	84(4.7%)	164(9.2%)	1782
61-70	895(87.6%)	98(9.6%)	29(2.8%)	1022
71-80	114(34.5%)	210(63.6%)	6(1.8%)	330
81-90	6(27.3%)	14(63.6%)	2(9.1%)	22
Total	2549(80.8%)	406 (12.9%)	201(6.4%)	3156

Majority of the cases with borderline and poor post operative visual outcomes were from rural population compared to the urban population and in the older age group. In the urban population, no poor outcome was seen in the age group of 50-60 and 61-70 years of age groups, while in the rural population,

11.5% of 50–60-year-olds and 3.7% of 61–70-year-olds had a poor outcome (Table 4.41). This result was also statistically significant (p<0.001).

Table 4.41: Post-operative visual outcome population background vs. age.

Population			Visual outcome			Total	P value
	Age		Good	Borderline	Poor		
Rural	50-60		1185	76	164	1425	<0.001
			83.2%	5.3%	11.5%	100.0%	
	61-70		685	68	29	782	
			87.6%	8.7%	3.7%	100.0%	
	71-80		66	158	4	228	
			28.9%	69.3%	1.8%	100.0%	
	81-90		2	8	2	12	
			16.7%	66.7%	16.7%	100.0%	
Total			1938	310	199	2447	
			79.2%	12.7%	8.1%	100.0%	
Urban	50-60		349	8	0	357	<0.001
			97.8%	2.2%	0.0%	100.0%	
	61-70		210	30	0	240	
			87.5%	12.5%	0.0%	100.0%	
	71-80		48	52	2	102	
			47.1%	51.0%	2.0%	100.0%	
	81-90		4	6	0	10	
			40.0%	60.0%	0.0%	100.0%	
Total			611	96	2	709	
			86.2%	13.5%	.3%	100.0%	



Controlled systemic comorbidities did not have any effect on post-surgical visual outcomes regardless of the age of the patients (Table 4.42)

3. Gender based analysis of the post-operative visual outcome

Overall good post-operative visual outcome was almost the same in both sexes (males 84.6%; females; 76.9%). Poor outcomes were noted in male gender (male;7.9%,female,4.8%) and this result was statistically significant ($p<0.001$) (Table 4.43).

Table 4.43: Gender based analysis of the post-operative visual outcome

Gender	Visual Outcome			Total	p value
	Good	Borderline	Poor		
Female	1331(84.6%)	166(10.6%)	76 (4.8%)	1573	<0.001
Male	1218(76.9%)	240(15.2%)	125(7.9%)	1583	
Total	2549(80.8%)	406(12.9%)	201(6.4%)	3156	

Correlation of gender-based Post operative visual outcome with the population demographics

Good visual outcome was observed to be of similar proportions for the females in both urban and rural populations (84.5%and86.4).Majority of the cases with poor visual outcome

were restricted to the rural population males (12.2%). The result was statistically significant ($p<0.001$). In the urban population, no significant difference is noted in visual outcome of two sexes (Table 4.44). The result was not statistically significant ($p<0.795$).

Table 4.44: Correlation of gender-based Post operative visual outcome with the population demographics

Background		Visual Outcome			Total	P value
		Good	Borderline	Poor		
Rural	Female	1217	148	76	1441	<0.001
		84.5%	10.3%	5.3%	100.0%	
	Male	721	162	123	1006	
		71.7%	16.1%	12.2%	100.0%	
	Total	1938	310	199	2447	
		79.2%	12.7%	8.1%	100.0%	
Urban	Female	114	18	0	132	<0.795
		86.4%	13.6%	0.0%	100.0%	
	Male	497	78	2	577	
		86.1%	13.5%	.3%	100.0%	
	Total	611	96	2	709	
		86.2%	13.5%	.3%	100.0%	
Total	Female	1331	166	76	1573	
		84.6%	10.6%	4.8%	100.0%	
	Male	1218	240	125	1583	
		76.9%	15.2%	7.9%	100.0%	
	Total	2549	406	201	3156	
		80.8%	12.9%	6.4%	100.0%	

4. Visual Outcome vs. Socioeconomic Status

Over all post operative visual outcome is good regardless of socioeconomic status of the individuals. No significant difference was observed in groups with in borderline vision

outcomes irrespective of the socioeconomic status. However, patients with poor visual outcome were from middle socioeconomic status group (22.2%). The result was statistically significant ($p<0.001$) (Table 4.46).

Table 4.46: Visual outcome in socioeconomic status

Socio-Economic Status (SES)	Visual Outcome			Total	p value
	Good	Borderline	Poor		
Upper (1)	708(86.6%)	106(13.0%)	4(0.5%)	818	<0.001
Middle (2)	531(61.7%)	138(16%)	191(22.2%)	860	
Lower (3)	1310(88.6%)	162(11%)	6(0.4%)	1478	
Total	2549	406	201	3156	

Amongst the rural population good visual outcome was seen in majority of cases regardless of socioeconomic status (upperclass:89%,middleclass:61.7%,lowerclass:88.6%), a

borderline and poor outcome was noted more middle-class rural population. The result was statistically significant ($p<0.001$). In the urban population, all cases belonged to the upper-class



socioeconomic status, and the majority of them (86.2%) obtained a good post-operative visual result, followed by a borderline visual result (13.5%) and only 0.3% of the subjects enrolled in the study were endowed with a poor visual outcome

(Table 4.47). Thus, living background, rural or urban, vis a vis socioeconomic status did not seems to influence the post operative visual outcome.

Table 4.47: Visual outcome vs. socioeconomic status in population background

Population			Visual Outcome			Total	P value
	SES		Good	Borderline	Poor		
Rural	Upper class		97	10	2	109	<0.001
			89.0%	9.2%	1.8%	100.0%	
		Middle class	531	138	191	860	
		61.7%	16.0%	22.2%	100.0%		
	Lower class	1310	162	6	1478		
		88.6%	11.0%	0.4%	100.0%		
Total			1938	310	199	2447	
			79.2%	12.7%	8.1%	100.0%	
Urban	SES	Upper Class	611	96	2	709	
			86.2%	13.5%	0.3%	100.0%	
	Total		611	96	2	709	
			86.2%	13.5%	0.3%	100.0%	

5. Visual outcome vs. Work environment

Post operative visual outcome was good in almost same ratio regardless of work environment (80.5% indoor workers, 81.4% outdoor workers). Poor outcome was comparatively more in

indoor workers than in outdoor workers (8.1% and 2.7%, respectively). The result is statistically significant (p<0.001)(Table 4.48).

Table 4.48: Post-operative visual outcome in work environment.

Working Environment (WE)	Visual Outcome			Total	p value
	Good	Borderline	Poor		
Indoor	1738(80.5%)	248(11.5%)	174(8.1%)	2160	<0.001
Outdoor	811(81.4%)	158(15.9%)	27(2.7%)	996	
Total	2549(80.8%)	406(12.9%)	201(6.4%)	3156	

In the rural population, there was no difference in good vision outcomes with regard to the work environment, but there was a significant difference amongst patients with poor vision outcomes (outdoors;3.2%,indoors;10.7%), and this result was statistically significant (p<0.001).

cases with poor visual outcome result (0.4%), and this result was not statistically significant (p<0.524).

In the urban population, visual outcome was good in majority of the cases regardless of work environment. There were only few

Amongst indoor workers the majority of the cases with poor outcome belonged to rural milieus compared to urban settings. There was no poor visual outcome result was found in the urban settings (Table 4.49).

Table 4.49: Post operative visual outcome in work environment and population background.

Population			Visual outcome			Total	P value
	WE		Good	Borderline	Poor		
Rural	Indoor		1256	176	172	1604	<0.001
			78.3%	11.0%	10.7%	100.0%	
		Outdoor	682	134	27	843	
		80.9%	15.9%	3.2%	100.0%		
	Total		1938	310	199	2447	
			79.2%	12.7%	8.1%	100.0%	
Urban	Indoor		482	72	2	556	<0.524
			86.7%	12.9%	0.4%	100.0%	
		Outdoor	129	24	0	153	
		84.3%	15.7%	0.0%	100.0%		
	Total		611	96	2	709	
			86.2%	13.5%	0.3%	100.0%	



6. Visual outcome vs. Addiction

Post-operative visual outcome did not seem to be affected in patients who consumed alcohol (84.1%) and smokeless tobacco

product users (85.2%) but is significantly poor in smokers (41%)(p=0.000) (Table 4.50).

Table 4.50: Visual outcome among addicted

Addiction	Visual Outcome			Total	p value
	Good	Borderline	Poor		
No	1793(80.8%)	218(10.8%)	8(0.4%)	2018	<0.000
Alcohol	74(84.1%)	8(9.1%)	6(6.8%)	88	
Smoking	162(36.9%)	97(22.1%)	180(41.0%)	439	
Tobacco	520(85.2%)	83(13.6%)	7(1.1%)	611	
Total	2549(80.8%)	406(12.9%)	201 (6.4%)	3156	

Pattern of proportion of poor visual outcome cases amongst Smokeless tobacco product consumers, smokers, alcoholics was almost similar in addicts from either rural or urban settings(Table 4.51)

7. Visual outcome vs systemic diseases

Over all post- operative visual outcome in cases with associated controlled systemic diseases was good. The result was statistically significant (p<0.001) (Table 4.52).

Table 4.52: Post-Operative Visual Outcome in Systemic Diseases

SD	Visual Outcome			Total
	Good	Borderline	Poor	
Nil	1176	192	186	1554
	75.7%	12.4%	12.0%	100.0%
DM	637	67	0	704
	90.5%	9.5%	0.0%	100.0%
HTN	613	91	15	719
	85.3%	12.7%	2.1%	100.0%
DM & HTN	32	10	0	42
	76.2%	23.8%	0.0%	100.0%
Other	91	46	0	137
	66.4%	33.6%	0.0%	100.0%
Total	2549	406	201	3156
	80.8%	12.9%	6.4%	100.0%

In patients having any controlled comorbid risk factors, post-operative visual outcome was good regardless of population

demographics. The result is statistically significant (p<0.001) (Table 4.53).

Table 4.53: Post-Operative Visual Outcome in patients with comorbidities residing urban and rural settings

Background	SD	Visual Outcome			Total	P value
		Good	Borderline	Poor		
Rural	Nil	882	160	186	1228	<0.001
		71.80%	13.00%	15.10%	100.00%	
	DM	497	53	0	550	
		90.40%	9.60%	0.00%	100.00%	
	HTN	469	65	13	547	
		85.70%	11.90%	2.40%	100.00%	
	DM & HTN	25	10	0	35	
71.40%		28.60%	0.00%	100.00%		
Others	65	22	0	87		
	74.70%	25.30%	0.00%	100.00%		
Total	1938	310	199	2447		
	79.20%	12.70%	8.10%	100.00%		
Urban	Nil	294	32	0	326	<0.001
		90.20%	9.80%	0.00%	100.00%	
	DM	140	14	0	154	
		90.90%	9.10%	0.00%	100.00%	
HTN	144	26	2	172		



		83.70%	15.10%	1.20%	100.00%
DM & HTN		7	0	0	7
		100.00%	0.00%	0.00%	100.00%
Others		26	24	0	50
		52.00%	48.00%	0.00%	100.00%
Total		611	96	2	709
		86.20%	13.50%	0.30%	100.00%

8. Visual Outcome in Associated Eye Diseases

Post-cataract surgery visual outcome does not seem to be affected by any associated eye disease (Table 4.54), probably because there was no or minimal involvement of retina- the neurosensory layer of eye. This finding was similar regardless of the patients demographic setting and this result was statistically significant ($p=0.001$) (Table 4.54).

9. Visual Outcome vs. Types of Cataracts

Post-surgical visual outcome was significantly good in nuclear (89.6%) and posterior subcapsular (88.1%) cataract types, with the exception of cortical cataract (73.4%). Poor outcome was more frequently observed in patients with cortical cataract

(11.3%) than in nuclear (0.5%) or posterior subcapsular cataract (1.4%)(Table 4.56).

This is explained by the fact in cases of nuclear and PSC the lenticular opacity was in line of visual axes, the effect on vision is more pronounced and more distressing to patients as compared to that in cases of cortical cataract where lenticular opacity being diffusely distributed in whole of the lens cortex. This causes blurring of vision, hence post operatively the clarity of the vision experienced by the individual is much better in cases who had nuclear cataract or PSC compared to those who had cortical cataract.

Table 4.56: Visual Outcome in types of cataracts.

Type of Cataract	Visual Outcome			Total
	Good	Borderline	Poor	
Cortical	1234(73.4%)	257(15.3%)	190(11.3%)	1681
Nuclear	944(89.6%)	105(10%)	5(0.5%)	1054
Posterior Subcapsular	371(88.1%)	44(10.5%)	6(1.4%)	421
Total	2549	406	201	3156

10. Post-surgical visual outcome vs. Type of surgery

A good post operative visual outcome result was observed in SICS (87.7%) as well as phacoemulsification (69.4%). Surgery

cases with borderline poor visual outcome cases were more common in phacoemulsification (16.1% and 14.5%) compared to SICS (10.9% and 1.4%) surgery group. (Table 4.58).

Table 4.58: Post Operative Visual Outcome in types of surgery.

Type of surgery	Visual Outcome			Total
	Good	Borderline	Poor	
Phaco	830 (69.4%)	193(16.1%)	173(14.5%)	1196
SICS	1719(87.7%)	213(10.9%)	28(1.4%)	1960
Total	2549	406	201	3156

DISCUSSION

In the present study, post-cataract surgery visual outcome results were good in the majority of the cases in all populations, regardless of demographic settings. (urban and rural). The poor visual outcome cases occurred mainly in the rural population (8.1% rural and 0.3% urban), and this result was statistically significant ($p<0.001$). This finding is in accord with a previous study conducted in Andhra Pradesh, in which a higher proportion of subjects in urban areas had a good score than in rural areas (77.6% vs. 70.6%; $p<0.001$) (Marmamula S. et al., 2016). There is an association between population background and visual outcome, with rural background population being a risk factor for poor outcome (OR 1.6, CI 1.2-2.0, $p<0.001$). With no specific explanation, this may be attributed mainly to the rural population's environmental factors and poor dietary habits.

Postoperative visual outcome decreased significantly with increasing age. The best outcome was achieved in the age group of 50-70 years, while the majority of borderline visual outcomes were in the age group of 71-90 years, and the majority of poor outcomes were in the still higher age group of 81-90 years. In contrast to the older age group in the urban population, the bulk of borderline and poor results were in the rural population. While the visual outcomes of the population in the corresponding age groups were positive, 11.5% of 50 to 60-year-olds and 3.7% of 61 to 70-year-olds in the rural population had bad outcomes. This finding was statistically significant ($p=0.001$).

There is a strong association between age and postoperative visual outcome, as increasing age decreases the likelihood of a good outcome (61-70; OR 0.8 CI, 0.6-1.1, $p=0.265$, 71-80; OR 11.72, CI 9.0-42.5, $p<0.001$, 81-90; OR 16.49, CI 6.3-42.5, $p<0.001$). Previous studies conducted in India (Dandona L et



al., 1999; Murthy GV et al., 2001; Thulasi raj R.D. et al., 2002; Vijaya L et al., 2002; Nirmalan PK et al., 2002; Khanna RC et al., 2003) support the findings of the present study that increasing age is a risk factor for post-surgical poor outcome.

In the present study, the overall postoperative visual outcome in the majority of the cases was good, regardless of gender. However, in patients with a poor visual outcome group, the male gender outnumbered the female gender (male; 7.9%, female, 4.8%), and this result was statistically significant ($p < 0.001$). The good visual outcome was in similar proportion for the female sex in both urban and rural populations (84.5% and 86.4%). Most of the cases with poor outcomes were males from the rural population (male; 12.2%, female; 5.3%). The result is statistically significant ($p = 0.000$). In the urban population, no significant difference was noted in the visual outcome of the two sexes. The finding was not statistically significant ($p = 0.795$), and this is akin to other studies (Marmamula S et al., 2016).

There is an association between gender and visual outcome. The male gender is at a 1.6 times higher risk of developing cataracts compared to females (OR was 1.6, CI 1.2-2.0 $p < 0.001$). As in other studies, Gogate et al., 2011 and Venkatesh et al., 2005 found a good outcome in female patients. (Gogate P et al 2011, Venkatesh R, 2005)

In their study, Yan X, Guan C, et al. 2013 and Hashemi H et al. 2012 found females gender at high risk for poor visual outcomes. This finding is contrary to observations made in our study. In another study conducted in the Indian state of Rajasthan, women (74%) were more prone to have poor visual outcomes after cataract surgery than men (62%), and people living in rural areas (73%) in comparison to those living in the urban areas (52%) (Murthy GVS et al., 2001). It is likely that females were studied at a later time point than males and had a poorer clinical presentation of cataracts, masking pre-existing ocular comorbidity/condition, thereby impacting the visual outcomes.

Considering postoperative visual outcome as the key finding, in the group of cases with good visual outcomes, socioeconomic status did not seem to have any influence on the result. There was no significant difference between borderline vision outcomes, but in poor vision outcomes group cases, there was a significant difference in the middle class (upper class; 0.5%, middle class; 22.2%, lower class; 0.4%), and this result was statistically significant ($p < 0.001$). Good vision scores were more frequent in the upper and lower classes than in the middle class (upper class: 89%, middle class: 61.7%, lower class: 88.6%), borderline and poor scores were found more frequently in the middle class of the rural population, and this result too was statistically significant ($p < 0.001$). In the urban population, all cases belonged to the upper class, and the majority of them (86.2%) obtained a good visual result, followed by a borderline visual result (13.5%), and only 0.3% with a poor result. This result was statistically significant ($p < 0.001$).

To some extent, socioeconomic status is a risk factor for postoperative visual outcomes. In middle-class families, the

visual outcome was worse than in upper-class families (OR 3.9, CI 3.1-5.0, $p < 0.001$). In the Andhra Pradesh Eye Disease Study in India, individuals with a monthly per capita income of \leq US\$4.5 had a fivefold higher risk of having a very poor visual outcome after cataract surgery (presenting visual acuity $< 6/60$) than persons with a monthly per capita income of $>$ US\$4.5 (Dandona L et al., 1999).

A vast proportion of cases with good and borderline vision were similar in indoor and outdoor workers, whereas poor outcome was more common among indoor workers than outdoor workers (8.1% and 2.7%, respectively). In the rural population, there was no difference in good vision outcomes (indoor; 78.3%, outdoor; 80.9%) with regard to the work environment, but there was a significant difference among patients with poor visual outcomes of outdoor and indoor (outdoors; 3.2%, indoors; 10.7%), and this result was statistically significant ($p < 0.001$). In the urban population, a good visual outcome result was obtained in the majority of cases, followed by a borderline visual result. There were only a few cases with poor visual outcome results (0.4%), and this result is not statistically significant ($p < 0.524$). Amongst the indoor worker, 's majority of the cases with poor outcomes were in the rural population compared to the urban population. No poor visual outcome result was found in the urban population; good and borderline visual outcomes were found in outdoor workers as in both groups. Work environment does not seem to be a risk factor for the post-surgical visual outcome (OR 0.939, $p < 0.524$).

In the present study, the visual outcome was significantly poor in smokers (41%) ($p < 0.001$). There was a significant difference in postoperative visual outcome in smokers (35.1%) compared to non-smokers (89.3%). This result was statistically significant ($p < 0.001$). Overall, in the urban population, the visual outcome result was like the rural population in terms of good visual outcomes. Smokers from the urban population had a borderline visual outcome (41.2%), while a vast majority of those from the rural population had a poor visual outcome (44.4%). Smoking and alcohol were the risk factors for postoperative visual outcomes. The risk for poor postoperative visual outcome was 13.5 times higher in smokers compared to non-smokers (OR 13.5 CI 10.6-17.2, $p < 0.000$) and 1.5 times higher in alcoholics (OR 1.5, CI 0.8-2.7, $p < 0.176$) (Table 4.63).

Postoperative visual outcomes are significantly good in all systemic conditions regardless of the population background of commonly associated systemic diseases. The result is statistically significant ($p < 0.001$). Controlled systemic comorbidities were not a risk factor for post-surgical borderline poor outcome (OR < 1). The rate of successful cataract surgery in the study population ACCORD was 67%. This shows that diabetic people currently have a relatively positive visual prognosis following cataract surgery. Studies have reported that 62% to 89% of people with diabetes achieve a good visual outcome (Cunliffe IA et al., 1991, Wagner T et al., 1996, Antcliff RJ et al., 1996, Somaiya MD et al., 2002). However, most of these studies included samples of fewer than 200 subjects, were more than 15 years old, and were conducted at a single institution. In contrast, this study involved a large sample



of a more recent population from multiple United States and Canadian centers. The visual outcomes, however, were comparable to those that had already been reported, which could be due to a number of factors. First, variations in patient characteristics, especially in the prevalence and severity of diabetic retinopathy between cohorts, are likely to have an impact on the visual results (Ostri C et al. 2011, Liu L et al. 2018). Due to slowed wound healing, an increase in infections, and a higher risk of developing diabetic retinopathy in diabetic patients, glycemic management is frequently a problem (Rayfield EJ et al. 1982; Brem H et al. 2007). These patients might benefit from putting more of an emphasis on postoperative follow-up, and it's important to take into account how social factors may affect visual outcomes. Visual outcome stays significantly good even in the presence of controlled or treated associated ocular diseases regardless of population background. Controlled ocular diseases are not a risk factor for postoperative visual outcome (OR>1).

Out of the total of 6370 participants with cataracts, the majority of patients had cortical cataracts (66.2%), followed by nuclear (27.1%) and a small number (6.6%) of posterior subcapsular cataracts. Phaco was performed in 1196 (37.8%), while SICS was used in 1960 (62.1%). Both Phaco as well as SICS were taken up in all types of cataracts, but in nuclear cataracts, SICS was the surgery of choice (88.5%). Postoperative visual outcome was significantly good in nuclear (89.6%) and posterior subcapsular (88.1%) cataract types, with the exception of cortical cataracts (73.4%). Poor visual outcomes were observed in cortical cataracts (11.3%) and only in 0.5% of cases of nuclear cataracts and posterior subcapsular cataracts (1.4%). These findings can be well explained because the maximum number of cases operated were of cortical cataracts, and hence, pitfalls are likely to be more in the same group. The clinical presentation of cataracts is not a risk factor for postoperative visual outcome (OR<1).

A percentage of good visual outcomes was observed in the majority of cases at SICS (87.7%) compared to phacoemulsification (69.4%). Borderline or poor visual outcome was more common with phacoemulsification (16.1% and 14.5%) compared to SICS (10.9% and 1.4%). This type of surgery was not a risk factor for postoperative visual outcomes.

CONCLUSION

To improve the quality of cataract surgery, the post-surgical visual outcome in a population-based study must be analyzed at regular intervals. The WHO has recommended values of $\geq 85\%$ to monitor the visual outcomes of cataract surgery. The patients with good visual outcomes achieved after surgery would act as good samaritans for the community. From the observations made and results found in the present study, the following conclusions have emerged clearly: Poor Visual outcome is more frequently seen in males, rural population group, advanced age group, middle socioeconomic status, indoor workers, and smokers. Controlled systemic diseases and eye diseases, morphological differences in the type of cataract and type of surgical technique (performed meticulously and judiciously) did not influence the post-surgical visual outcome.

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KOCASU RIVER DELTA IN TERMS OF HOLISTIC SUSTAINABILITY

Dr, Necdet INCEDAYI
Independent Scientist

ABSTRACT

The distortion on the ecosystem is caused by human impacts in general. People, by affecting the ecosystem they live and nonliving entities leads to deterioration of the ecosystem. People who are also one part of the ecosystem began to play a changer role in our globe especially after the industrial revolution. With the development of technology, this process has become dominant over time. The creation of uncontrolled population gathering areas, inappropriate land use, unplanned urban sprawl, use of natural resources in an unconscious and uninhibited way, forest destruction and pollution of water resources the release of greenhouse gases into the atmosphere can be some examples. Therefore, the atmosphere, lithosphere, hydrosphere and biosphere destruction lead to ecosystem problems. This negative experience of those losses affects the whole system together with other elements of the biosphere. River delta and the immediate surroundings of Kocasu, hosting the terms of the diversity of natural habitats has unique natural wealth with delta, dune plants, marsh, swamp natural forests and lagoons it hosts several lives. Swamp forests consisting of ash, alder and willow; lilies, sea bean, tamarisk, hyacinths, onions lake, aquatic plants such as oak rabbit; black stork, Ferruginous, pochard, marsh swallow, Kentish Plover, little bittern, the night heron, pied herons, little egret, gray herons, swans, green head, garganey, Hungarian duck, apple head Duck, White-Tailed Eagle, coot, oystercatcher, the tern, little tern and the delta where several woodpecker species, bird species such as the pygmy cormorants and white pelicans are housed during migration. Examination field has earned the status of Important Bird Areas breeding bird populations such as black storks, marsh swallow, cut necklace rain bird. Soil frog, marsh frog, spotted turtle, striped turtles, water snakes, amphibians and reptiles such as the southern crested newt living in the area are other biosphere elements. These lagoons are home to extinct eel with pike, roach, carp, flounder, and fish such as rhodeus sericeus amarusich. The Tatars black chards on the field in terms of endemic species of vegetation are in the high-risk category. Sand lilies, rhododendron protection priority; discrete sand, while the lake onion is located in the delicate protected category. The spleen herb is considered endemic in the low-risk group. Swamp forests, dune plants, aquatic vegetation, birds and lagoons of ecotourism and geomorphotourism poses potential appeal. Although natural sites in Dalyan, pollution in Poyraz and Arapçiftliği the lagoons, incorrect land use, chemical fertilizer use, Kocasu mixing the river water with the Bursa industrial waste, siltation, eutrophication, sand withdrawal, some wrong practices, such as cutting of trees in the swamp forests leads to compensation impossible degradation.

KEY WORDS: Kocasu River Delta, Ecology, Vegetation, Climate, Air, Water, Soil, Degradation

AIM AND SCOPE

The most rational approach to the protection of natural life is holistic area protection (Ekinci 2016, Ekinci, 2022). Living species cannot exist without suitable quality and size of living spaces. While area protection protects living environments on the one hand, it also allows different living species from plants to birds to be protected together, thus ensuring the protection of biological diversity as a whole. When protected together with natural habitats, species are affected more indirectly by new situations and changes since they are in the ecosystem they are formed in, and they have more opportunities to adapt to changes (Ekinci, 2004). On the other hand, these areas are also important for understanding and seeing the conditions and rules that dominate life on our planet. The importance of determining "Important Bird Areas" and "Important Natural Areas" and protecting them in accordance with the purpose is therefore not limited to birds and other species only (Ari, 2001). The quality information provided by the increasingly widespread birdwatcher and nature lover community allows our understanding of

important areas such as the Kocasu Stream Delta and its immediate surroundings to change rapidly and allows us to realize the threat much more strikingly. From this perspective, our country continues to be an important study area in terms of the ecosystems it contains (Bariş, 2006, Özşahin, 2009). The study area also has the potential of a quiet city due to its natural and human characteristics (Ekinci 2024a).

For this purpose, it is necessary to evaluate the Kocasu Stream Delta and its immediate surroundings with its unique nature and ecosystem from an ecological perspective and examine them from a geographical perspective. As a result of ecological degradation, events such as biosphere destruction, plant migration, excessive rainfall and floods, drought, and changes in groundwater levels are experienced. Having accurate and sufficient information about urbanization (Ekinci vd., 2007), ecosystem degradation and the changes that occur as a result of this constitute the first step of planning and sustainable management of natural resources (Ekinci and Akkaya, 2013a, b). Therefore, the study aims to



identify the problems that exist in the field and to plan the solution of these problems (Ekinci, 2016). The main purpose of the study is to examine the Kocasu Stream Delta and its immediate surroundings from an ecological perspective. Karacabey Longoz Forest, which has a rare ecosystem, and the natural life around it is special enough to be included among the natural heritage of not only the local people but also the world and are important places that need to be examined and researched (Özen, 2010). According to the researches, it is understood that tourism demands for natural environments have increased day by day in recent years and this increase will continue. According to the researches, it is understood that tourism demands for natural environments have increased day by day in recent years and this increase will continue (Atalay, 2008).

It is seen that the Kocasu Stream Delta Longoz, which is one of the few in the world and an important flooded forest of our country, is a natural environment that attracts attention with its natural richness, touristic attractions, flora and fauna diversity and has national and international importance. However, it has been understood that the studies conducted on the region are quite limited and it has been foreseen that a study should be conducted on the subject.

INTRODUCTION

The Kocasu Stream Delta, formed by the Susurluk River, consists of lakes, swamps, sand dunes and floodplain forests. The Kocasu Stream Delta is located on the southern coast of the Marmara Sea within the borders of Bursa province. It is approximately 30 kilometers away from the Karacabey district (Figure 1).

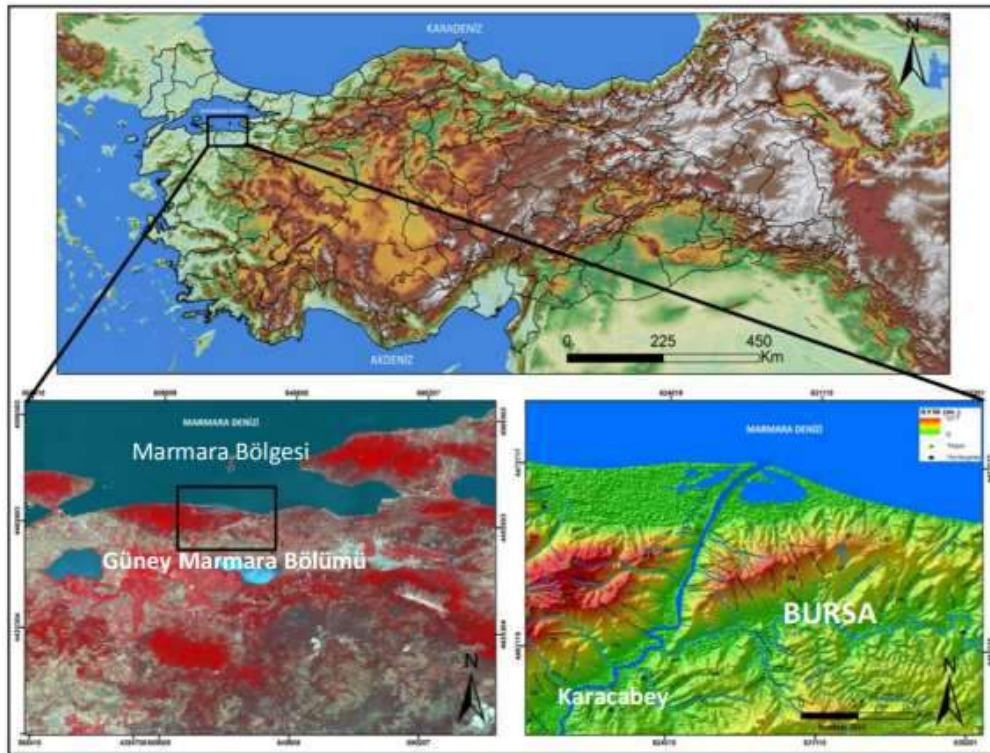


Fig 1: Location Map of Kocasu River Delta

The study area consists of lakes, swamps, sand dunes and floodplain forest ecosystems. In the western half of the delta, the Dalyan and Poyraz lakes, which have a total area of 194 hectares and are fed by the Maliç Stream, reeds covering an area of 600 hectares, floodplain forests consisting of ash, alder and willows spread over an area of 730 hectares and a wide sand dune band with a wide variety of flora are worth evaluating and analyzing in this respect (Saçın, 2010). Species breeding in this area include black stork, ferruginous duck, marsh swallow, white-legged plover, little bittern, night heron, pied heron, little egret, grey heron, swan, mallard, garter, Hungarian duck, common pochard, white-tailed eagle, coot, poyraz bird, tern, little tern and many woodpecker species. In addition, during migration, there are large

numbers of water birds, especially pygmy cormorant, white pelican and in winter, coot.

The aim is to determine the habitat characteristics of these birds and what needs to be done for their survival. Longoz, also known as flooded forest, is one of the few forest types. Longoz is a special ecosystem formed where the sand brought by the streams flowing towards the sea accumulates, forms a barrier on the shore and closes the mouth of the stream. Only certain tree, plant and bird species are found in this habitat. The most basic condition for the continuity of this ecosystem is the continuity of water. Clay and organic materials coming with water enrich the soil (Kazancı et al., 2009a, b). Again, the water lily flowers covering the wetlands of the area make it inevitable to research this area and



include it in the areas that need to be protected. This research is important in terms of better understanding the importance of Karacabey Longozu, lagoons and delta area, revealing its natural riches, determining its touristic attractions, determining the types of tourism that can be developed, ensuring the sustainability of the region and revealing the opinions of local stakeholders about the region.

Today, increasing touristic demands for natural environments have led to the need to protect and develop these regions. With the increase in these demands, the risk of damage, pollution and destruction of natural environments increases (Özer vd., 1996). It is understood that ensuring that tourism activities are carried out without damaging these regions and raising the awareness of local governments and local people is important. The studies of local stakeholders about the region, measures taken to protect natural assets, and raising the awareness of local people are the most important elements affecting sustainability. Again, our research aims to reveal the geomorphotouristic supply elements of the region, to raise awareness about its richness, to give ideas about the types of tourism that can be developed and to reveal the views of the relevant stakeholders on the sustainability of the region.

Due to the unplanned increase in population density and the rapid destruction and misuse of natural resources, the effects of ecosystem degradation are increasing day by day. Against these environmental ecologic problems like similar lake (Ekinci, and Şenol, 2013), where people have a great impact on the formation of damages, determining what people living in the field and in the basin of this field or affected by these 25 basins should do to combat the problems and reduce the damages can also be counted among the objectives. Again, in line with this purpose; the determination of ecosystem features such as hydrogeological, morphological, atmospheric, climatological, biological and the presentation of their characteristics constitute the scope of the thesis. Sustaining the Functions and Values of the Study Area It is obvious that with effective precautions, the rivers, lagoons, marshes and other wetlands, agricultural areas, birds, land and sea animals and plant species in the Kocasu Stream Delta and its close vicinity can be protected for many years with rational methods. Activities such as industry, agriculture, tourism and urbanization are evaluated as pressure, and the results of these activities on the environment are evaluated as impact. Environmental factors affecting the Kocasu Stream Delta; The excessive pollution of the Nilüfer Stream with various industrial wastes and the pollution of the lagoons and wetland habitats in the Kocasu Stream water collection area, the continuous extraction of sand from the streams feeding the sandy areas, the transportation of garbage from Yeniköy and nearby settlements and domestic wastes resulting from tourism activities to the garbage collection area inside the delta, the free roaming of cattle throughout the year in the delta, illegal hunting in the lakes in the delta, and the destruction of the forests in the delta to open up agricultural land, winter wood and poplar groves are practices that disrupt sustainability.

Regulatory rules should be implemented in and around the delta as soon as possible and the way of supervision should be increased day by day with much better methods. Thus, the principles of sustainable management should be put into practice.

ECOLOGICAL FEATURES OF KOCASU STREAM DELTA IN MAIN LINES

The study area has an important place in terms of ecology due to the fact that it contains marine, coastal, forest and wetland ecosystems at the same time and is located on an important bird migration route passing through Anatolia. The Marmara Transition type of the Mediterranean climate is dominant in the area.

There are forms of river and coastal morphology in the area. A monogenic topography draws attention. Kocasu Stream Delta, Karacabey Strait, Dalyan, Poyraz and Arapçiftliği lagoons are remarkable landforms. The main streams in the area are Nilüfer Stream, Hanife Creek, Kara Creek, Çapaz Stream and Kocasu Stream.

In terms of vegetation, the Delta hosts many natural lives with its longoz forest, sand dune plants, swamps, longoz forests and lagoons. Longoz forests consisting of ash, alder and willows; aquatic plants such as water lily, sea bean, tamarisk, hyacinth, lake bulb and rabbit oak are widely found. In terms of vegetation, the Tatar krapazi is an endemic species in the field in the high-risk category. Sand lily, rhododendron are priority in protection; sand wheat, lake onion are in the sensitive protected category. Another endemic species, dalakotu, is evaluated in the low-risk group. In the delta, the inner parts of Dalyan and Poyraz Lagoon, the coastal parts of Dalyan Lagoon bordering the Marmara Sea, the sandy areas where Kocaçay opens to the sea, Arapçiftliği Lagoon and Kocasu Stream are rich areas in terms of birds (Turan, 1990a, b).

The delta, where black storks, ferruginous waders, pochards, swifts, white-legged plovers, little bitterns, night herons, pied herons, little egrets, grey herons, swans, mallards, gargantians, Hungarian ducks, common pochards, white-tailed eagles, coots, mallards, terns, little terns and several woodpeckers are found, also hosts bird species such as pygmy cormorants and white pelicans during migration (Seçmen and Leblebici, 1996; Yaman, 2008).

The study area has gained the status of an Important Bird Area with the breeding populations of black storks, swifts and cut-necked plovers. There are 114 bird species in 15 orders and 44 families in the Kocaçay Delta. 38 species are local, 22 species are summer migrants, 11 species are winter migrants and 16 species are transit. In the Kocaçay Delta, representatives of 15 out of 20 bird orders found in our country were encountered. Passeriformes is in the first place with 48 species, Charadriiformes is in the second place with 17 species, and Ciconiiformes is in the third place with 9 species. According to IUCN criteria, 110 out of 114



species identified in the delta are in the Low Risk (LC), 2 are in the Vulnerable (VU) and 1 is in the Near Threatened (NT) class. *Pelecanus crispus* is in the VU (vulnerable) danger class of 200. The area has gained the status of Important Bird Area (IBA) with the breeding populations of Black Stork (*Ciconia nigra*), Marsh Martin (*Glareolapratincola*) and Cut-Ring Plover (*Charadrius alexandrinus*). Specific birds such as *Glareolapratincola*, *Charadrius alexandrinus* and *Ciconia nigra* also live in the area. *Charadrius alexandrinus* is definitely breeding in the delta, *Glareolapratincola* probably is breeding in the delta. *Motacilla citreola* is also a rare species seen in the Kocaya Delta. Little Cormorant, which was under threat of extinction on a global scale until recently, lives in the Kocaya Delta. *Motacilla alba*, *Delichon urbica*, *Calandrella brachydactyla*, *Charadrius alexandrinus* are other species breeding in the Kocaya Delta. *Larus cachinnans* is seen in the Kocaya Delta. Amphibians and reptiles such as earth frog, plain frog, spotted turtle, striped turtle, water snake, crested salamander are other biosphere elements living in the area. In addition to these, the lagoons host endangered eels and fish such as pike, rudd, carp, flounder, *rhodeus sericeus amarusicus* (Altunel, 1990, Oğuz, 1991).

HOLISTIC SUSTAINABLE ASSESSMENTS

The lithosphere, biosphere, atmosphere and hydrosphere characteristics that make up the ecosystem are shaped especially in the context of human interaction (Ekinci, 2012; Ekinci, and Karataş, 2012). Therefore, evaluating these factors together provides a correct human and spatial interaction. In addition, the climate change we are experiencing today raises concerns about whether the world is going through a process of extinction (Ekinci, 2024b, c).

Domestic and industrial wastewater, diffuse pollutants from animal husbandry and agriculture and atmospheric transport are the most important pressure elements for the study area. Especially pollution in Nilüfer Stream, mining activities, fertilizer use and human destruction are the main pressure elements. Despite being a natural protected area, pollution in Dalyan, Poyraz and Arapçiftliği lagoons, wrong land use, chemical fertilizer use, industrial wastes of Bursa province mixing with Koçasu Stream, siltation, eutrophication, sand extraction, cutting down trees in longoz forests and some wrong applications lead to irreparable degradations. Environmental factors affecting Kocaya Delta; The excessive pollution of Nilüfer Stream with various industrial wastes and the pollution of lake and wetland habitats in Kocaya water basin, continuous sand extraction from streams feeding sandy areas, transportation of garbage from Yeniköy and nearby settlements and domestic wastes resulting from tourism activities to the garbage collection area inside the delta, stray cattle and sheep roaming around the delta throughout the year, illegal hunting in the lakes in the delta, destruction of forests in the delta to open up agricultural land, winter wood and poplar groves. 201 Bursa province, which is among the most developed areas in terms of industry, is also among the polluting provinces in terms of air quality. Gases and dust originating from

vehicles, industrial and domestic heating reach the stream and delta through dry and wet deposition.

A large-scale modeling study should be conducted to determine the effect of atmospheric transport in Nilüfer Stream and air quality should be monitored. Important examples of point pollution sources include industries, sewage systems, mines, solid waste storage areas and animal manure storage. Domestic wastewater originating from settlements, wastewater originating from industries, wastewater and solid waste originating from large animal fattening areas, leachate from solid waste storage facilities, septic tank discharge water from rural areas are the main pollutants and cause great damage to the ecosystem. The main sources of diffuse pollution are agriculture, forestry, fisheries and fish farms, and mining activities. Among these, agriculture has a great impact. Diffuse pressures particularly affect the chemical quality of water. Especially phosphorus and nitrogen enrichment caused by agricultural activities cause eutrophication in surface waters. This artificial enrichment process has negative effects on the biological diversity in the water source and water quality.

In addition, this situation may reduce the value of water bodies used for recreation and water supply. Bursa Province, which is located in the hinterland in terms of affecting the field, contributes to the Turkish economy with industrial establishments operating in textile, automotive, food and leather sectors as one of the important industrial cities of our country. These have half of the WWTPs and the untreated water reaches the field via Nilüfer. There is also wastewater originating from mining activities carried out in the field. It was observed that Kesteleks Boron Enterprise discharged its wastewater into Orhaneli Stream. The enterprise has a discharge permit obtained on 27.07.2005. It was determined that there are fundamental problems related to water usage in the region within the triangle of agriculture, industry and domestic use, and that water is consumed much more than the need, especially due to the flood type wild irrigation methods used in agriculture. The pollution caused by Kocaya coming from the mine in Balya both pollutes Lake Manyas and carries a negative burden on the water budget of the basin. The fact that Borax facilities established in the early 1970s discharged their waste into the lake through Sığircı Creek until the late 1990s encourages pollution. 202 In addition, it has been determined that most of these businesses consume underground water and send this water back to the same reservoir after using it, in addition to the presence of intensive industry. In addition to these, despite the underground wells expressed in the number of 1000s in the Nilüfer Stream area in Bursa Plain alone, the number of licensed wells does not exceed 100. Precautions should be taken in streams where water quality is Class IV in terms of many parameters and has been determined as hot spots. First of all, point pollutant sources in the hot spot area (domestic, industrial, OSB etc.) should be subjected to a detailed examination in terms of capacity and treatment performance with good production and treatment technologies and possible improvements should be made within a certain period of time.



The river environment where the hot spot is located should also be examined in terms of Ecological Flow (Environmental Flow) and whether the necessary environmental flow is continuously available should be determined within the framework of the principles of the Regulation on Amendments to the Regulation on Procedures and Principles Regarding the Signing of Water Usage Rights Agreements for Production Activities in the Electricity Market published by the General Directorate of State Hydraulic Works. Discharge standards should be provided for some basic parameters included in the Communiqué on Hazardous Substances in Water, such as PAH, color, total phenols and pesticides for industries. Sustainable management principles should be implemented in every field in the study area. For this purpose, global partnerships should be established with civil society organizations focused on ecology, protection, tourism and environment issues to share priorities, exchange knowledge, skills and achievements and thus grow with competence, competence and efficiency. The focus should be on the elements that threaten the ecosystem, especially biodiversity, to the most dramatic extent and these should be identified and their rehabilitation should be ensured. Action plans should be created and implemented to stop the damage in the field, prevent further damage, repair the damage and protect the ecological, cultural and biological diversity of the field. Relationships should be established and developed between the relevant parties in order to positively develop the impact of policy makers on the environment. Studies should be carried out on sustainable transportation and tourism and these should be implemented. Human education should be provided on sustainable development, environmentally and socially responsible tourism, sustainable regional development and effective environmental education by looking at the sustainability of nature in the field from a democracy and equality perspective and awareness should be increased on these issues. Partnerships should be established between scientists, the public, educators and the business community on the sustainable use and protection of natural resources and cultural heritage. In particular, organizations should be made to influence, encourage and assist individuals, institutions and organizations in order to protect the integrity and diversity of nature and to guarantee the equal and ecologically sustainable distribution of natural resources in terms of the effects of this in the field. The scientific data produced by committees consisting of scientists should be made available to civil society organizations and policy-making institutions working on this issue. In order for visitors to protected areas to benefit from educational structures and vehicles, their attention must first be attracted. For this purpose, the use of different types of vehicles instead of conventional and ordinary vehicles will appeal to visitors of all ages, education, gender and cultural levels and allow them to focus on them. Tourism is an important economic activity and all indicators show that this activity will tend to grow.

With the growth in tourism, the demand for nature-related tourism such as sustainable tourism and ecotourism has increased, as has the diversity in tourism products. Just as nature-based tourism types are rapidly developing all over the world, tourism trends for

unique unspoiled natural environments and rural areas are also developing in our country. In addition to comfortable travel and accommodation, tourist demands are directed towards different desires such as learning about cultural values specific to the region, flora and fauna diversity of natural regions, special ecosystems and interest in natural life. Thus, we see that the demands for ecotourism types are increasing day by day. In the face of these increasing demands, it is very important to ensure the sustainable use of the richness of regions with their unique attractions and qualities without destroying them, to protect and develop natural and cultural values, and to develop a tourism concept that ensures the participation and development of local people in tourism activities. Nature-based tourism activities, which are among the alternative tourism types, create both national and regional tourism supply and make great contributions to regional and national development. Natural environments enable the realization of different ecotourism types. The protection of these environments, which provide visitors with unforgettable times in calm and peaceful environments, also requires responsibilities such as maintaining their biodiversity and ensuring protection against natural disasters. Ecotourism, which protects the environment and looks after the welfare of local people and is sensitive to natural areas, should be developed through sustainable tourism policies. Increasing the quality of life of regions by maintaining environmental quality and increasing the economic and environmental contributions of tourism will be possible with the implementation of sustainable tourism policies. The protection and development of natural tourism resources should be ensured through joint efforts of experts and local stakeholders. All stages of planning processes should be carried out within the scope of sustainable tourism principles, and all local governments and relevant stakeholders should fulfill their duties. It is possible to be successful in this way by using the sustainable use of the region in which natural areas and protected areas are located. In this way, the needs of the hosts and tourist segments in the tourism industry will be met in a long-term and uninterrupted manner by preserving the resources that exist today and their values in the future. In sustainable tourism development, it is aimed to meet the current needs of visitors by preserving and expanding future opportunities. This approach includes the continuation of economic, social and aesthetic needs, cultural integrity, essential ecological processes, biodiversity and processes that support natural life.

The United Nations World Tourism Organization emphasizes that in holistic sustainable tourism development; environmental resources should be used in the best way, the socio-cultural structure and traditions of the visited communities should be respected, and socio-economic benefits should be distributed fairly to all interest groups and consistent and long-term economic activities should be presented. It is also known that some activities carried out in natural areas cause harm. For this reason, we, who are responsible for protecting nature, need to be in good harmony with our environment. It is the right course of action for individuals and institutions to be pioneers for the control of activities in nature and for the development of nature



tourism in natural areas. In recent years, it is quite pleasing that civil society organizations and other organizations have also contributed to the development and protection cooperation for such natural areas. Sustainable nature tourism and ecotourism have emerged with an understanding that ensures the protection of natural environments against the negative effects of mass tourism. These developments have led to an increase in tourism-related projects and studies in the regional planning of natural areas and their surroundings. Thus, tourism has pioneered the development of these regions over time and the increase in their local and cultural richness. Sustainable use of natural areas and protected areas will be more successful when considered within the scope of tourism, ecological agriculture, local products and sustainable principles. The existence of the tourism industry is structured on the environment and people. Holistic sustainability in tourism can only be meaningful with long-term strategies and planning. Sustainable tourism is a commitment to nature and requires integration with the local people. Increasing the quality of tourism, protecting destinations and improving the future of the tourism sector is possible with sustainability. Adopting sustainability principles in the tourism sector and conducting studies in this direction will ensure the protection of natural and cultural riches.

Correct policies and actions in this direction will increase the benefits of the tourism sector and reduce its costs. Sustainable tourism provides economic benefits to destinations while creating opportunities to minimize negative impacts on natural assets and the environment. Sustainable tourism development is expected to affect the local economy, the protection of natural and cultural heritage, and the increase in the quality of life of hosts and visitors by minimizing the negative impacts on society and the environment. Our country is in a very important position in world tourism in terms of both its geographical location and touristic values. It is very important to diversify, promote and market this wealth that our country has, to increase its socio-economic contribution and to ensure its sustainability. Today, it is seen that there is a shift away from the axis of sea, sand, sun and mass tourism and towards nature tourism. It is seen that the demand for these areas is increasing in our country, which has natural conditions and richness suitable for all kinds of tourism activities in all four seasons. In the face of increasing demands, it is necessary to ensure the planned and sustainable use of these areas. Sustainable tourism requires ensuring the continuity of natural, cultural, ecological etc. resources and making plans and studies in this direction. The plans should take into account the natural life, local people, environmental and economic effects. In order to achieve these goals, all relevant units, especially the Ministry of Culture and Tourism, the Ministry of Environment and Forestry, should act in a coordinated manner and develop projects and carry out studies. In order for tourism activities carried out in natural environments not to harm the natural environment and the environment, good planning should be done for these regions. The expectations of the local people should be addressed with the sustainable tourism approach, and in addition to making joint decisions for the protection of the natural and cultural values that

contain the development potential of the region, it is essential to use the skills and knowledge of the local people in the most appropriate way in the implementation and monitoring stages. In the sustainable tourism development stage, there are common interests of nature and the environment. Accommodation and other tourism infrastructures should be outside the natural area as much as possible. This situation minimizes the damage to nature and culture, and can increase the benefit to the region where activities such as guest houses can be carried out. Local people and other regional interest groups are important partners in tourism development, these groups will provide accommodation opportunities to tourists and will also take responsibility for the preservation of the quality of the product they will offer.

Natural areas are generally very sensitive, therefore ecological values will not be limited to a specific area. Traditional life, local culture, rural socio-economic structures are also the main source of tourism. Longoz forests, dune plants, aquatic vegetation, bird species and lagoons are attractive with their ecotourism and geomorphotourism potentials. Longoz, lagoons and delta are a unique ecosystem in terms of biological diversity and natural beauty, and therefore, they are a natural heritage that should be left to future generations without damaging their natural structure. In the preparation phase for tourism in the field; natural and cultural values should be determined, target audience analysis, visitor characteristics and land use status should be determined (Ekinici, 2006; Ekinici and Sönmez, 2006). In the planning and implementation phase, the tools and activities needed for education and awareness-raising in the area should be determined, and park employees who will take part in education and awareness-raising should be trained. A visitor center should be established, educational and informative tools and equipment planned to be in the visitor center should be provided, designed and produced. Places suitable for walking paths and tour routes should be determined and designed in a way that will not harm the natural and cultural values of the site, the ecosystem and the living creatures living in the area. Warning, guidance and information signs to be placed along the visitor center and walking route should be designed, implemented and placed in appropriate places in the area. Printed materials such as maps, brochures and books that introduce the natural and cultural values of the site should be designed and produced, handicrafts and local products produced by local people should be offered to visitors coming to the area, measures should be taken to encourage local people for this, contact should be established with tour operators that will bring ecological and nature-oriented visitors to the area, and when accommodation is needed, opportunities should be created in the immediate vicinity that will not negatively affect the site. The planned visitor center and connected park structures should be compatible with the site, should not conflict with the natural and ecological values of the site, should be compatible with the geographical features of the site and natural materials found in the area or in the immediate vicinity should be preferred. Since the site is covered with vegetation, it would be appropriate to build a tower in the area and observation huts that are suitable for the natural environment and will allow the birds to be watched



without being disturbed. It can be stated that the area does not have the awareness it deserves. The reasons for this are; misuse of natural and economic resources and economic inadequacy, lack of organization and coordination, ineffectiveness of civil society organizations as a whole, increase in lake destruction due to lack of control, opening of channels for agricultural purposes, use of water in the lake as irrigation water, lack of control or inadequacy, lack of sufficient understanding of the meaning and importance of longoz within the region, functioning or non-operation of purification systems, inadequacy of controls related to hunting, unconscious and uncontrolled hunting activities, increase in consumption needs, increase in demand for opening fields, viewing the lake as agricultural land, lack of awareness among the local people, and continuation of agriculture depending on limited products.

The main problems are the disappearance of floodplains in the area, the decrease in biodiversity and the deterioration of the wetland ecosystem. Due to these problems, the species are decreasing and especially the number of bird species using the area as a breeding and feeding area is decreasing. In order to prevent these, the Management and Development Plan for the protection of the Kocaçay Delta should be introduced to universities and NGOs and its implementation should be monitored. Mechanisms should be established to monitor the ecosystem of the area. A cooperation environment should be created with universities, research institutions and NGOs. Support should be given to conduct research on the required issues. Contacting local public institutions and organizations and interest groups for the promotion of the area will be among the works required for the ecological protection of the delta. Cultural and natural recreation opportunities that will diversify tourism, generate income, support the local economy and ensure the continuity of local customs and traditions should be developed. The action plan proposed for the 208 area is grouped as what needs to be done in the short, medium and long term. Accordingly, in this process covering thirty years of planning, the first 5 years (2015-2020) were determined as short term, the second 5 years (2020-2025) as medium term and the following 25 years (2025-2050) as long term. Urban WWTPs need to be built in the short term. If settlements are located in drinking water basins or have gained sensitive area status or if existing treatment systems require revision depending on the population, the necessary revisions should be made within the periods given in the legislation. All individual industries and OIZs should be ensured to make the necessary arrangements to comply with the discharge standards specified in the legislation, such as WWTP construction and environmental permits. In olive oil production enterprises, sectoral cooperation meetings should be held to prevent pollution caused by olive OMW and the solution methods to be determined as a result should be put into practice. In addition, it is essential to take the necessary measures to urgently prevent all uncontrolled discharges from such facilities to the sewage system and the recipient environment. The rehabilitation of solid waste irregular storage areas should be completed in all settlements in the basin. Hot spots and their effects should be monitored within

the field borders for the management of pollution originating from mining waste. In order to minimize the effects of agricultural pressure in the basin, Agricultural Pollution Management studies should be carried out first in the villages located around the river and then in the settlements affected by the streams feeding the stream. Fertilizer and pesticide sales should be controlled. The local people should be made aware of good agricultural practices such as organic farming and drip irrigation and encouraged to use them.

In small/medium-scale enterprises within the Livestock Organized Industrial Zone, animal wastes can be stabilized in compost and/or anaerobic digestion (biomethane) facilities and directed to organic matter and/or bioenergy recycling projects, and significant economic input can be obtained from renewable energy incentives and organic fertilizer production. By establishing effective coordination and cooperation with local units of the Ministry of Agriculture and Rural Affairs, small enterprises in regions where animal husbandry is intense can be encouraged to take place in the Livestock Organized Industrial Zone, and transition to large-scale enterprises can be targeted. In large-scale individual enterprises and small/medium-scale enterprises within the Livestock Organized Industrial Zone, animal wastes can be stabilized in compost and/or anaerobic digestion (biomethane) facilities and directed to organic matter and/or bioenergy recycling projects, and significant economic input can be obtained from renewable energy incentives and organic fertilizer production. The purpose of use should be determined according to the high groundwater abstraction for agricultural purposes in the field, according to the precipitation status, the flow rate of the stream, and the storage of treated wastewater, and water consumers should be directed accordingly. Longoz and Wetland Protection Areas, management plan services should be completed, and aquaculture production conditions in line with international standards should be provided. In the medium term, WWTPs should be built in the villages located in the study area in accordance with the legislation. If the settlements are located in drinking water basins or have gained sensitive area status or if the existing treatment systems require revision depending on the population, the necessary revisions should be made within the periods given in the legislation. The studies to be carried out to prevent diffuse and point loads originating from agricultural and animal husbandry activities should be started in the short term and their continuity should be ensured in the medium and long term. Systematic and continuous studies should be continued in the fight against erosion. Monitoring the flow and quality of underground and surface waters, reuse of treated wastewater, and agricultural water use reduction studies should be monitored and inspected. In the long term, all activities to be carried out within the scope of the Action Plan should be continuously monitored by the HSA/ÇİB and their compliance with the legislation should be ensured.

RESULT

The Kocasu Stream Delta should not be used unlimitedly but protected; it should be utilized as an ecological value rather than



unlimited consumption and should be transferred to future generations. As stated, both terrestrial and aquatic ecosystems coexist in the Kocasu Stream Delta. The Kocasu Stream aquatic ecosystems; Dalyan, Poyraz, Arapçiftliği lagoons constitute the stagnant water ecosystems. Flooded forests and forest areas constitute the terrestrial ecosystem. Since these ecosystems contain many different vegetation types such as sand dunes, wetlands, maquis and forest vegetation, this delta is an important area in terms of floristic and phytosociological aspects. The biological diversity, natural, cultural, historical and landscape resource values of natural areas should be protected not only for today but also for future generations to benefit from these values. In this context, natural areas that are considered important due to the resource values they carry are protected by national laws and international agreements. Research and experience show that declaring an area as a protected area and surrounding it is not sufficient for effective protection. Effective and sustainable protection is only possible by introducing the values, making them accepted and owning them. Properly introducing protected areas with extremely sensitive ecosystems and raising public awareness constitutes one of the most effective tools for establishing a balance between protection and use and ensuring sustainable development. One of the important tools used in the protection of natural areas is the establishment of "Protected Areas". However, in order for protection to be effective and to ensure sustainability, the resource values of these areas must be known in detail and promoted. Protected areas also attract visitors due to their resource values and landscape richness.

In recent years, interest in nature has been increasing and accordingly the number of visitors to natural areas has also increased. While this situation brings some negativities such as pollution and pressure on the one hand, it also creates a good opportunity for educating and raising awareness of people who visit these areas without any age, gender etc. Important natural areas in our country are protected with 18 different protection statuses. Sometimes more than one protection status is given to a single area. While some of these protection statuses are declared according to national legislation, some are established based on international agreements. However, there are limited opportunities to implement all of these statuses and for this reason, the areas cannot be managed effectively. A total of 839,663 hectares of natural area, corresponding to 1.07% of Turkey, is protected with the National Parks Law No. 2873 dated 9 August 1983. Within the scope of this law, protection statuses such as national park, nature conservation area, nature monument and nature park are classified. National Parks are areas that have national and international importance in terms of scientific and aesthetics; They are areas with natural and cultural resource values and areas for protection, recreation and tourism. Nature Conservation Areas are areas that contain rare, endangered or endangered ecosystems and species that are important in terms of scientific studies and education. The areas must be absolutely protected and their use is allowed only for scientific and educational purposes. Natural Monuments include areas with extraordinary features and scientific values created by natural

events. Natural monuments must be protected within the principles of national parks. Natural Parks are natural areas with important vegetation and wildlife features, suitable for people to rest and have fun within the integrity of the natural landscape and are protected with this status. One of the most important tools for educating visitors and local people coming to protected areas, using the resource values without destroying them and promoting them and raising public awareness is undoubtedly the visitor center, information boards, walking paths, observation towers and cabins and other supporting services. In promotion, information and awareness-raising activities for visitors in protected areas, planning and implementation of park structures and services undertake important functions. There are also civil society organizations that have priorities and aim for protection. The Turkish Nature Conservation Association (TTKD), the Natural Life Conservation Association (DHKD and WWF Turkey), the Greenpeace Mediterranean Campaign Office, the Hunting and 160 Wildlife Protection and Development Foundation, the Turkish Environment Foundation (TCV), the Environmental and Cultural Values Protection Foundation (ÇEKÜL), the Turkish Erosion Combat and Afforestation Foundation (TEMA), the Coastal Areas National Committee (KAY), the Clean Sea Association (TURMEPA), the Marine Species Research Foundation (TÜDAV), the Rural Environment and Forestry Problems Association (KIRÇEV), the Underwater Research Association (SAD), the Mediterranean Seal Research Group (AFAG), the Bird Research Association (KAD), the Ecological Agriculture Organization Association (ETO), the International Union of Local Authorities (UNO for Local Authorities, IULA), the Aegean Natural Life Conservation Association (EgeDoğa), the Nature Association, and the Bird Bank are the main ones (Özesmi, 2000, 2002; Özesmi et al., 2003).

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INNOVATIVE THERAPIES FOR POSTPARTUM PELVIC FLOOR REHABILITATION AND ITS APPLICATION IN NURSING

Dr. (Prof) Meenu Paul¹

¹Professor, OBG Nursing Department, Anushree College of Nursing, Jabalpur, MP

ABSTRACT

Pelvic floor dysfunction is a prevalent issue among postpartum women, often leading to urinary incontinence, pelvic organ prolapse, and sexual dysfunction. Traditional methods such as Kegel exercises have long been the cornerstone of pelvic floor rehabilitation. However, recent advancements have introduced innovative therapies that offer enhanced recovery outcomes. This review explores these novel approaches, evaluates their effectiveness, and discusses their application in nursing practice, providing a comprehensive guide for healthcare professionals involved in postpartum care.

KEYWORDS: Postpartum, Pelvic Floor Rehabilitation, Nursing, Innovative Therapies, Biofeedback, Electrical Stimulation, Physical Therapy, Holistic Approaches

INTRODUCTION

Postpartum pelvic floor dysfunction affects a significant number of women following childbirth, impacting their quality of life and overall well-being. The pelvic floor, a group of muscles and connective tissues, supports the bladder, uterus, and rectum. Childbirth, particularly vaginal delivery, can weaken or damage these structures, leading to dysfunction. Symptoms include urinary incontinence, fecal incontinence, pelvic organ prolapse, and sexual dysfunction, which can have profound physical and psychological effects on affected women.

Traditional rehabilitation methods, such as Kegel exercises, have been widely used and proven effective to a degree. However, these methods often face challenges related to patient compliance, motivation, and varying degrees of success. In response, innovative therapies have emerged, offering new approaches to treatment that promise improved outcomes. This review examines these cutting-edge therapies, evaluates their effectiveness, and explores their practical application in nursing.

INNOVATIVE THERAPIES

1. Biofeedback Therapy

Mechanism and Application

Biofeedback therapy utilizes electronic monitoring devices to help patients gain awareness and control over their physiological functions. In the context of pelvic floor rehabilitation, biofeedback provides real-time feedback on muscle activity, helping women identify and strengthen their pelvic floor muscles.

Effectiveness

Several studies have demonstrated the efficacy of biofeedback therapy in improving pelvic floor muscle strength and function. A systematic review by Hagen and Stark (2011) found that biofeedback significantly improves urinary incontinence symptoms compared to no treatment or placebo. Biofeedback

is particularly useful for patients who have difficulty identifying and contracting their pelvic floor muscles.

Clinical Integration

Nurses can play a crucial role in the application of biofeedback therapy by:

- Educating patients about the benefits and use of biofeedback devices.
- Assisting in the setup and calibration of biofeedback equipment.
- Providing ongoing support and encouragement to ensure patient adherence.

2. Electrical Stimulation

Mechanism and Application

Electrical stimulation involves the use of low-grade electrical currents to stimulate pelvic floor muscles. This therapy can be administered through vaginal or anal probes, providing direct muscle stimulation that enhances strength and endurance.

Effectiveness

Research indicates that electrical stimulation is effective in reducing symptoms of urinary incontinence and improving pelvic muscle tone. A review by Dumoulin et al. (2018) found that women who received electrical stimulation showed significant improvements in pelvic floor muscle strength and a reduction in incontinence episodes compared to control groups.

Clinical Integration

Nurses can facilitate the use of electrical stimulation by:

- Educating patients on the proper use and benefits of electrical stimulation devices.
- Monitoring patient progress and adjusting therapy settings as needed.
- Providing support to enhance patient compliance and address any concerns.



3. Physical Therapy and Manual Techniques

Mechanism and Application

Advanced physical therapy techniques, including manual manipulation, myofascial release, and targeted exercise programs, address specific pelvic floor issues. Physical therapists trained in pelvic floor dysfunction can deliver these therapies, which involve hands-on techniques to release tight muscles, improve tissue mobility, and strengthen the pelvic floor.

Effectiveness

Studies have shown that physical therapy and manual techniques significantly improve pelvic floor function and reduce pain. For example, a study by Mørkved and Bø (2014) demonstrated that women who underwent physical therapy reported substantial improvements in pelvic floor muscle strength and a reduction in pelvic organ prolapse symptoms.

Clinical Integration

Nurses can support physical therapy by:

- Referring patients to specialized physical therapists.
- Coordinating care plans that include physical therapy as a component.
- Providing follow-up care and monitoring patient progress.

4. Integrative and Holistic Approaches

Mechanism and Application

Holistic approaches, such as yoga, Pilates, and mindfulness, focus on the overall well-being of the patient. These methods not only enhance pelvic floor strength but also address the mental and emotional aspects of postpartum recovery.

Effectiveness

Research supports the benefits of holistic approaches in pelvic floor rehabilitation. A study by Woodley et al. (2017) found that yoga and Pilates significantly improve pelvic floor muscle strength and flexibility, while mindfulness practices reduce stress and enhance overall well-being.

Clinical Integration

Nurses can integrate holistic approaches into care plans by:

- Educating patients about the benefits of holistic therapies.
- Recommending specific yoga or Pilates classes designed for postpartum women.
- Encouraging mindfulness and stress reduction practices as part of a comprehensive rehabilitation program.

5. Technology-Enhanced Rehabilitation

Mechanism and Application

Mobile applications and wearable devices are revolutionizing pelvic floor therapy by providing patients with real-time feedback, exercise reminders, and progress tracking. These technologies increase patient engagement and adherence to rehabilitation programs, leading to better outcomes.

Effectiveness

Studies have shown that technology-enhanced rehabilitation improves patient adherence and outcomes. For instance, Price et al. (2010) reported that women who used mobile apps for pelvic floor exercises had higher adherence rates and better symptom improvement compared to those who did not use such tools.

Clinical Integration

Nurses can facilitate the use of technology in rehabilitation by:

- Recommending and demonstrating effective mobile apps and wearable devices.
- Monitoring patient progress through app-generated reports.
- Providing technical support and encouragement to enhance patient engagement.

Application in Nursing

Nurses play a pivotal role in the successful implementation of innovative therapies for postpartum pelvic floor rehabilitation. Their responsibilities encompass various aspects of patient care, including assessment, education, personalized care planning, support, interdisciplinary collaboration, and monitoring.

Assessment and Education

Nurses are often the first point of contact for postpartum women experiencing pelvic floor dysfunction. They can assess the severity of symptoms, identify potential risk factors, and educate patients about the importance of pelvic floor health and available therapeutic options.

Personalized Care Plans

Developing individualized rehabilitation plans that incorporate innovative therapies is crucial for achieving optimal outcomes. Nurses can tailor these plans based on the patient's specific needs, preferences, and lifestyle, ensuring a holistic approach to care.

Support and Motivation

Providing ongoing support and motivation is essential for patient adherence to rehabilitation programs. Nurses can offer encouragement, address concerns, and celebrate progress, fostering a positive and empowering environment for recovery.

Interdisciplinary Collaboration

Collaborating with physical therapists, gynecologists, and other healthcare providers ensures comprehensive and coordinated care. Nurses can facilitate communication between different professionals, ensuring that all aspects of the patient's health are addressed.

Monitoring and Evaluation

Regularly assessing patient progress and adjusting treatment plans as necessary is vital for successful rehabilitation. Nurses can monitor patient outcomes, identify any barriers to progress, and modify care plans to enhance effectiveness.



CONCLUSION

Innovative therapies for postpartum pelvic floor rehabilitation offer promising advancements in the management of pelvic floor dysfunction. By incorporating these methods into nursing practice, healthcare professionals can enhance patient outcomes, improve quality of life, and support holistic postpartum recovery. Continued research and training in these innovative therapies are essential for their successful implementation and integration into standard care protocols.

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SILENT NAVIGATORS: UNVEILING SCHOOL HEADS' JOURNEY IN THE NEW NORMAL SELF-PACED MODULAR INSTRUCTION

Junard P. Duterte

Davao del Norte State College, Philippines

ABSTRACT

This phenomenological study explores the lived experiences of school heads in implementing modular instruction during the new normal in education. As educational institutions faced unprecedented challenges due to the COVID-19 pandemic, school leaders were tasked with adapting to a modular learning approach designed to ensure continuity of education while adhering to health protocols. Through in-depth interviews and focus group discussions with ten elementary school heads in Davao Region, Philippines, the study reveals several core themes. These include adherence to school policies, strategic resource management, the creation of supportive work environments, and the necessity of flexibility and adaptability in leadership. The findings highlight the importance of effective policy implementation, resource allocation, and community engagement in overcoming the challenges of modular instruction. The study contributes to the existing literature by providing insights into how school leaders navigate these new educational realities, emphasizing the role of strong leadership and resilience. Practical implications include the need for targeted training and support for school leaders, improved resource management strategies, and fostering collaborative community partnerships. Theoretical implications reinforce the importance of leadership theories that emphasize flexibility and support. The study's limitations include the small sample size and regional focus, suggesting the need for further research with larger, more diverse samples and longitudinal approaches.

KEYWORDS: *modular instruction, educational leadership, phenomenology, new normal education, resource management, school leadership*

I. INTRODUCTION

The global education landscape has undergone unprecedented transformations in response to the COVID-19 pandemic, precipitating a shift towards modular instruction as a critical strategy for sustaining educational continuity during the new normal. This shift has posed significant challenges and opportunities for school leaders, who are pivotal in navigating the complexities of this emergent instructional paradigm. The modular approach, characterized by self-contained units of instruction designed to facilitate remote or blended learning, has become a prevalent model in elementary education as schools grapple with disruptions and constraints imposed by the pandemic [4; 13].

As the primary custodians of educational quality and management, school heads have been at the forefront of implementing modular instruction. However, adopting this instructional model has revealed various issues and concerns that merit closer examination. Recent studies have highlighted several challenges associated with modular instruction, including the adequacy of resources, the effectiveness of pedagogical strategies, and the impact on student engagement and learning outcomes [25; 33]. Moreover, the effectiveness of modular instruction is often contingent upon the support systems available to school leaders and their capacity to adapt to rapidly evolving educational contexts [22].

Despite the growing body of literature on instructional strategies during the pandemic, there still needs to be a notable gap in understanding the lived experiences of school heads in implementing modular instruction. Existing research has focused mainly on the experiences of teachers and students, with less attention given to the perspectives of school leaders who are integral to the successful execution of these instructional models [19; 32]. As school heads navigate the demands of modular instruction, their insights and experiences are crucial for identifying best practices, addressing challenges, and informing future educational policies and practices.

This study aims to bridge this gap by exploring and describing the lived experiences of school leaders in the context of modular instruction in elementary schools. By focusing on these leaders' personal and professional journeys, this research seeks to provide a nuanced understanding of the implementation process, uncovering the strategies employed, the obstacles encountered, and the lessons learned. The findings will contribute to a more comprehensive understanding of how school heads can effectively manage and lead modular instruction, ultimately enhancing the quality of education in the new normal.

II. LITERATURE REVIEW

This study is grounded in two vital theoretical frameworks: Transformative Leadership Theory and Constructivist Learning Theory. Transformative Leadership Theory emphasizes the role



of leaders in inspiring and guiding their teams through significant changes [6; 2]. School heads are expected to lead their institutions through the complexities of adapting instructional practices to new realities in modular instruction. This theory provides a lens to understand the dynamic leadership strategies and challenges school leaders face in implementing modular approaches during the new normal.

Constructivist Learning Theory underpins the modular instructional approach by emphasizing the importance of learner-centered, flexible educational experiences. Modular instruction aligns with constructivist principles by allowing students to engage with content self-directedly, promoting active learning and individualized pacing [26; 34]. This theoretical perspective helps to frame the study's focus on how school leaders facilitate and manage the implementation of modular instruction in a way that aligns with constructivist ideals.

Recent literature highlights several aspects of implementing modular instruction in response to the COVID-19 pandemic. Studies have reported educators' and administrators' challenges adapting to remote and modular learning environments. For instance, one research explores the transition from traditional to remote learning, noting significant technological access and pedagogical adjustment difficulties [19]. Similarly, another study emphasizes the uneven implementation of online and modular strategies, revealing disparities in resource availability and support systems [32].

One study indicates that while modular instruction offers flexibility, it also presents challenges in maintaining student engagement and ensuring consistent learning outcomes [13]. Their study underscores the need for effective leadership in managing these challenges and adapting instructional practices. Another research further elaborates on the importance of robust leadership in facilitating online and modular learning environments, highlighting that school leaders play a critical role in addressing the needs of both teachers and students during transitions [25].

However, a notable gap in the literature is the need for more focus on the experiences of school heads specifically. Most studies have concentrated on the perspectives of teachers and students [22; 33], with more attention being given to the unique challenges and strategies of school leaders in implementing modular instruction. This oversight is significant, as school heads are crucial in orchestrating the shift to modular education and ensuring its effective execution.

The existing body of research provides valuable insights into the challenges and strategies associated with modular instruction. However, there needs to be more clarity concerning the lived experiences of school leaders. While there is extensive literature on instructional practices and student outcomes, less emphasis has been placed on understanding how school heads navigate the complexities of implementing modular instruction. This study aims to address this gap by focusing specifically on the

experiences of school leaders, providing a nuanced understanding of their roles, challenges, and strategies in the context of the new normal.

By exploring the lived experiences of school heads, this study will contribute to a more comprehensive understanding of the implementation of modular instruction, offering insights critical for improving educational practices and supporting school leaders in future crises. This research will thus fill an essential gap in the literature, offering valuable implications for policy and practice in elementary education.

III. METHODOLOGY

This study employs a phenomenological research design to explore and describe the lived experiences of school heads in implementing modular instruction during the new normal. Phenomenology is particularly suited for this study as it focuses on understanding how individuals experience and interpret their social realities [8]. By delving into the personal experiences of school leaders, this approach allows for an in-depth exploration of their perspectives on the challenges and strategies associated with modular instruction.

The study targeted ten elementary school heads from Davao de Oro, Philippines. Participants were selected using purposive sampling, a technique that ensures the inclusion of individuals with specific characteristics relevant to the research question [24]. School heads were chosen based on their direct involvement in implementing modular instruction, ensuring that their insights would be pertinent to understanding the phenomenon under investigation.

Data were gathered through in-depth interviews and focus group discussions (FGDs). In-depth interviews were conducted to obtain detailed, personal accounts from each school head regarding their experiences with modular instruction. These interviews allowed for a thorough exploration of individual perspectives and provided rich, nuanced data [28]. Each interview lasted approximately 60-90 minutes and was audio-recorded with the consent of the participants.

Focus group discussions were also employed to facilitate interactive dialogue among participants. FGDs enabled the exploration of common themes and collective experiences, offering a broader perspective on implementing modular instruction [23]. The FGDs were conducted in a group setting with 4-5 participants per session, lasting 90-120 minutes each. Like the interviews, these discussions were audio-recorded with participant consent.

The collected data were analyzed using the Interpretive Phenomenological Analysis (IPA) model, which is well-suited for examining how individuals make sense of their personal and social worlds [30]. The IPA model involves several key steps, which are as follows: 1) Transcription: Audio recordings from the interviews and FGDs were transcribed verbatim; 2) Initial



Reading and Noting: The transcripts were read multiple times to familiarize the author with the content and note initial impressions; 3) Coding: Significant statements and themes were identified and coded; 4) Theme Development: Codes were grouped into themes reflecting the core experiences and perceptions of the participants; 5) Interpretation: Themes were interpreted with the research question and theoretical framework to understand the phenomenon comprehensively.

Several ethical considerations were addressed throughout the study to ensure the integrity of the research and the protection of participants:

- A. *Informed Consent*: Participants were provided detailed information about the study's purpose, procedures, and potential risks before involvement. Consent was obtained in writing from all participants before data collection [16].
- B. *Confidentiality*: Participants' identities and responses were kept confidential. Data were stored securely, and personal identifiers were removed from the transcripts to protect privacy [11].
- C. *Voluntary Participation*: Participation in the study was voluntary, and participants had the right to withdraw at any time without penalty. They were informed of their right to withdraw and the study's implications [14].
- D. *Data Handling*: Audio recordings and transcripts were handled carefully to prevent unauthorized access. Only the researcher and authorized personnel had access to the data [5].

By adhering to these ethical guidelines, the study aimed to ensure that participants' rights were respected and that the research was conducted with the highest standards of ethical integrity.

IV. FINDINGS

The Interpretative Phenomenological Analysis (IPA) of the lived experiences of school heads in implementing modular instruction during the new normal reveals several themes that encapsulate their experiences, challenges, and rewards. These themes provide a nuanced understanding of how school leaders navigated the complexities of modular learning. The following themes emerged from the core ideas and responses provided by the participants:

A. *Navigating Policy and Procedural Adherence*

School heads experienced a sense of accomplishment and stability in adhering to policies and procedures designed for modular instruction. This adherence provided a clear framework that guided their efforts and ensured consistency in implementation. One participant shared, "Adhering to the set guidelines and protocols was essential. It helped align our strategies and maintain order amidst the chaos."

Promoting a culture of compliance was also highlighted as a critical experience. School heads found that fostering an environment where staff and stakeholders followed organizational guidelines helped streamline the implementation

process. As noted by another school head, "Encouraging everyone to adhere to the protocols created a sense of unity and clarity, making the transition smoother for everyone involved."

B. *Resource Management and Financial Planning*

Effective resource management emerged as a central theme. School heads took significant steps to procure supplies and allocate budgets to support modular instruction. This included budgeting for module production and distribution. One participant recounted, "Managing resources and ensuring we had the necessary supplies was challenging, but seeing the impact on our students was rewarding."

Securing additional resources through sponsors and donations was also a notable experience. School heads actively sought external support to address resource gaps. One school head explained, "Finding sponsors and receiving donations made a huge difference. It allowed us to provide better resources and support for our modular instruction."

C. *Creating a Supportive and Positive Work Environment*

Creating a supportive work environment for teachers was a significant theme. School heads prioritized managing personnel effectively, providing support, and fostering a sense of belonging among staff. This approach was crucial in maintaining morale and motivation. One participant noted, "Handling our staff with care and ensuring they felt valued was key to keeping their spirits up during these challenging times."

Listening to faculty concerns and offering positive reinforcement were essential to fostering a supportive environment. "Being available to listen to our teachers and offering encouragement helped them feel supported and less overwhelmed," another participant shared.

D. *Flexibility and Adaptation*

Flexibility in managing the modular approach was a recurring theme. School heads valued the ability to adapt schedules, instructional methods, and rules to fit the needs of the new normal. This flexibility extended to transforming school personnel to be adaptable in their roles. One school head commented, "Embracing flexibility allowed us to adjust our approach and address issues as they arose, which was crucial in maintaining continuity."

Implementing continuity plans amid various challenges also highlighted the importance of adaptability. As noted, "Despite the hurdles, having a plan and being flexible helped us ensure that learning continued effectively."

E. *Building and Maintaining Community Partnerships*

The theme of community engagement was prominent. School heads found it rewarding to build partnerships with parents, local officials, and community organizations to support modular instruction. These partnerships facilitated resource sharing and support. One participant observed, "Collaborating with parents



and local organizations helped us mobilize resources and create a strong support network.”

Establishing networks with government and non-government organizations (GOs and NGOs) further underscored the value of community engagement. "Securing support from various organizations and involving them in our efforts was a significant boost for our modular instruction program," another participant noted.

F. Exemplifying Strong Leadership and Resilience

Strong leadership and resilience were highlighted as crucial experiences. School heads took pride in their ability to lead their schools through the difficulties of modular instruction. This included making firm decisions and promoting resilience among staff and students. One participant reflected, "Leading through these times required strength and decisiveness, but seeing our efforts lead to positive outcomes made it worthwhile."

Promoting resilience in education, despite the pandemic, was also rewarding. "Encouraging a resilient mindset and focusing on continuity in education was essential for overcoming the obstacles we faced," another school had shared.

V. DISCUSSION

This study aimed to explore the lived experiences of school heads in implementing modular instruction during the new normal. By analyzing the findings, we can connect these experiences to the research question: "What are the lived experiences of the school heads in implementing modular learning in the new normal?" The discussion below contextualizes these findings with relevant literature and examines their alignment with or divergence from previous studies. It explores practical, theoretical, and policy implications, limitations, and suggestions for further research.

The adherence to school policies and procedures and promoting a culture of compliance were highlighted as vital and rewarding aspects. This aligns with previous research, which suggests that structured policies are essential for the effective implementation of educational innovations [12]. Effective adherence to established guidelines helps to maintain consistency and clarity, which is crucial in managing the complexities of new educational approaches [17]. The finding that promoting a culture of compliance was beneficial reflects the importance of creating a shared understanding and commitment among school staff, consistent with studies highlighting the role of organizational culture in successful educational reform [20].

The theme of strategic resource management aligns with the literature on the critical role of resource allocation in the successful implementation of educational initiatives. Research indicates that effective management of resources, including financial planning and securing external support, is pivotal in addressing the challenges of implementing new instructional methods [1]. The experience of school heads in procuring supplies and seeking sponsorships mirrors findings from studies

emphasizing the need for comprehensive resource management to support innovative practices in education [16].

Creating a supportive work environment for teachers, including managing personnel and fostering a sense of belonging, aligns with the literature on leadership and organizational behavior. Studies show that influential school leaders who support and maintain a positive work climate contribute to better teacher performance and job satisfaction [9]. This finding corroborates research emphasizing the importance of supportive leadership in fostering a productive and motivated teaching staff [26].

The findings regarding flexibility in managing schedules, instruction, and adapting to new conditions align with the literature on the necessity of flexibility in educational leadership. Research highlights that the ability to adapt and be flexible is crucial for leaders managing educational reforms, especially during times of crisis [14]. The emphasis on adaptability and innovation in implementing modular instruction reflects broader discussions on the need for educational leaders to be responsive to evolving challenges [30].

The theme of community engagement and partnership aligns with the literature on the role of community support in educational success. Studies indicate that strong partnerships with parents, local officials, and community organizations are vital for the effective implementation of educational initiatives [11]. The positive experiences reported by school heads in securing community support and resources reflect the importance of collaborative efforts in achieving educational goals [28].

The theme of strong leadership and resilience resonates with existing research on the qualities necessary for effective educational leadership. Studies emphasize that resilient leaders who make firm decisions and navigate challenges effectively are critical for maintaining continuity and driving positive educational outcomes [19]. The experiences of school heads in demonstrating resilience amid the pandemic highlight the importance of robust leadership in times of crisis [7].

VI. IMPLICATIONS OF THE STUDY

A. Practical Implications

1. *Enhanced Training and Support.* The findings suggest that training programs for school heads should emphasize policy adherence, resource management, and creating supportive work environments. Providing targeted support in these areas can enhance the effectiveness of modular instruction and other educational innovations.
2. *Resource Allocation.* Managing resources and securing external support are crucial. Schools should develop strategies for budgeting and sourcing additional resources to support modular instruction.
3. *Community Engagement.* Building and maintaining strong community partnerships can provide essential support for educational initiatives. Schools should



actively engage with parents, local officials, and community organizations.

B. Theoretical Implications:

1. *Leadership Theories.* The study reinforces the importance of leadership theories that emphasize flexibility, support, and resilience. The findings support the application of transformational and adaptive leadership theories in the context of educational reform [3].
 2. *Educational Innovation.* The experiences of school heads contribute to theoretical discussions on how educational innovations are implemented and sustained in practice. The study provides insights into the practical application of theoretical concepts related to educational change.
- #### C. Policy Implications:
1. *Policy Development.* Policies should be developed to support school leaders in managing modular instruction, including guidelines for resource allocation and community engagement.
 2. *Support Structures.* Governments and educational authorities should create support structures for school heads, including financial assistance, training programs, and resources to facilitate the implementation of modular instruction.

VII. LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The study is based on a small sample of ten school heads from a specific province, which may limit the generalizability of the findings. Future research could include a more extensive and diverse sample to enhance the applicability of the results. The study focuses on the context of Davao de Oro, which may only partially capture the experiences of school heads in other regions with different educational and socio-economic conditions.

Other researchers may conduct comparative studies involving school heads from different regions or countries to explore how contextual factors influence the implementation of modular instruction. Longitudinal research could examine how the experiences of school heads evolve and the long-term impacts of modular instruction on educational outcomes. Further research could investigate how implementing modular instruction affects student learning outcomes and engagement.

VIII. CONCLUSION

The findings of this study provide valuable insights into the lived experiences of school heads in implementing modular instruction. By connecting these experiences to existing literature, the study highlights the importance of policy adherence, resource management, supportive leadership, flexibility, community engagement, and resilience. These insights have practical, theoretical, and policy implications for enhancing the effectiveness of educational leadership and modular instruction. Addressing the limitations and pursuing further research can contribute to a deeper understanding of the challenges and

opportunities associated with modular education in diverse contexts.

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AN EXAMINATION OF FINANCIAL PERFORMANCE: A REVIEW STUDY

Ghata H. Shah¹, Dr. Dipesh Patel²

¹Research Scholar, Assistant Professor, SDJ International College, Vesu Affiliated to VNSGU, Surat

²Guide, I/C Principal, Smt. Z. S. Patel College of Management, Affiliated to VNSGU, Surat

¹Correspondence Author: Ghata H. Shah

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ABSTRACT

In order to undertake any research a strong background study is always required. Research always stands on a strong footing in the form of comprehensive and extensive research review. A researcher has to always get conversant with the prevailing research domains, methods, instruments used by previous researchers for undertaking similar type of studies. Only then the researcher will be able to diagnose the vacuum in the research conducted till date and what addition to existing knowledge can be made by him/her. Financial performance analysis of firms in similar industries has always been a hot favourite topic of researchers and its never ending as firms might perform well in one year and in other year might even experience depression. Hence, while undertaking research in financial performance analysis a strong base of deep review of existing knowledge is inevitably required. This paper has attempted to summarise the findings of some literature on performance analysis in finance terms already existing in research domain to facilitate research community to take such research ahead in future.

KEYWORDS: Financial performance analysis, literature review

1. INTRODUCTION

The assessment of the financial performance of companies operating in the same industry has garnered significant attention from both business stakeholders and researchers over the years. This comparative analysis involves evaluating the financial statements of companies with similar business activities or domains. Such an analysis aims to provide insights into how these selected companies are faring financially in their operations and which among them is demonstrating superior performance.

Comparative analysis has been conducted in various domains, encompassing sectors like banking, insurance, pharmaceuticals, fertilizers, electricity distribution, automobiles, airlines, ceramics, plastics, tea production, paper manufacturing, cement production, information technology, diamonds, sugar production, textiles, and many more.

Comparative analysis of companies within the same industries has been conducted across a range of countries, including but not limited to the United States, the United Kingdom, Germany, Japan, Metro Manila, China, Nigeria, Europe, Sweden, South Africa, New Zealand, Pakistan, and many others.

A literature review holds a crucial role in research as it familiarizes the researcher with prior work in the same subject area. It provides in-depth knowledge about previous studies conducted within the researcher's chosen field, aiding in the identification of gaps between existing research and the upcoming study. So here an attempt has been made to provide a summary of reviewed literature for financial performance analysis.

2. DEFINITION OF TERMS UTILISED

• Analysis of financial performance

Analysis of financial performance stands for analysing/studying how the business units are operating financially. Thereby, it assesses the performance of business units in financial terms. Finance is the life blood of the business unit. As human activities cannot be performed without blood similarly business activities cannot be performed without finance. Thus, finance can also be taken as the spinal cord of the business.

• Literature review

Review of literature stands for reviewing the existing ocean of knowledge and thereby making our own way in the research journey. It is like taking the base of whatever is done and thereby design our own path.

• Empirical Literature

Literature in empirical sense stands for historical literature already existing in the area of study which researcher wants to explore.

3. SIGNIFICANCE OF THE STUDY

Finance is the life blood of any business enterprise. Without finance no business activity is possible. Moreover, the primary goal of any enterprise is to earn profits, to pay handsome dividends to shareholders, to build prestige in the market etc. All these goals require finance for their fulfilment. The study has relevance in the sense for undertaking any research review of existing literature is needed, this paper will highlight the summaries of many works already conducted facilitating new researchers to undertake research in such arenas easily.



4. OBJECTIVES OF THE STUDY

The objectives of this paper are:

- To facilitate the researchers with the existing knowledge of financial performance analysis presented in condensed form.
- To have an idea of general/ common tools of analysis employed by prior scholars for financial analysis.
- To know about the important indicators of financial performance.
- To get an idea of past top performers in different industries.

5. RESEARCH METHODOLOGY

This research paper is mainly descriptive and analytical in nature. The study is mainly based on secondary data. Such data has been collected from already published sources. Research works taken in this study for analysis are mainly obtained from google scholar, Shodhganga and such other sources. An attempt has been made to include even international works in this analytical review.

6. LIMITATIONS

The limitations of this study are as under:

- Limited articles only are considered for analytical purpose.
- Research works having analysis of financial performance are only considered.

7. REVIEW OF EMPIRICAL LITERATURE

The empirical literature encompasses an examination of studies conducted to advance the existing knowledge within a specific field of study. This review enables the researcher to become well-acquainted with the goals, methods, and instruments employed by previous researchers in their respective fields of engagement.

- Author:** Dr. D. Silambarasan, Dr. R. Raja and Mr. P. Mathivanan
Year: 2022
Industry: Steel Industry- Tata Steel
Tools used: DuPont Model
Examination: Financial Performance assessment of Tata steel using DuPont model
Conclusions: Performance of the company was good
- Author:** S. Sowmiyaa, S. Moghana Lavanya, K. Mahendran and V. Geethalakshmi
Year: 2021
Industry: Fertilizer Industry
Tools used: Altman Z Score
Examination: Financial performance of Indian fertilizer Industry
Conclusions: The study concluded that companies formed in 1960s performed better financially than the companies of later periods
- Author:** Manoj Babu P.
Year: 2021
Industry: Steel Industry- SAIL and Tata Steel
Tools used: financial leverages, ratio analysis, predictive analysis
Examination: Impact of capital structure on financial performance of steel companies in India

Conclusions: It was observed that both the companies have a progressive fluctuating trend for the internal capitalization value and market capitalization value.

- Author:** Rajput Vijaybhai Mahendrabhai
Year: 2020
Industry: Telecom Industry
Tools Used: Ratio analysis, Trend analysis, Z Score analysis, measures of central tendency, measures of dispersion, analysis of variance
Examination: Financial performance of Telecom companies in India
Conclusions: Conclusions have been drawn for profitability, financial structure, liquidity, activity and Z score analysis.
- Author:** Barot, Rohitkumar P.
Year: 2020
Industry: Pharmaceutical Industry
Tools Used: Ratio analysis and analysis of variance
Examination: Financial performance of pharmaceutical companies in India
Conclusions: Conclusions for calculation of all ratios have been drawn and significant relationship between ratios were observed.
- Author:** Dr. M. Mohanasundari, Dr. P. Sundharesalingam, Mr. S. Naveen Raja, Mr. V. S. Sivaprakash
Year: 2020
Industry: Plastic Industry
Tools used: DuPont computation, comparative ratio analysis and principal component analysis
Examination: DuPont analysis for assessing financial performance in plastic industry
Conclusions: Investors primarily favor Finolex as their top choice among companies. Following closely, Supreme Industries exhibits promising indicators for shareholders who prioritize profits, including positive returns on capital employed, return on long-term funds, a favorable dividend payout ratio, and encouraging results from the DuPont analysis.
- Author:** Dr. A. Muthusamy and S. Karthika
Year: 2019
Industry: Cement Industry
Tools Used: Correlation analysis, Ratio analysis, measures of central tendency
Examination: Financial performance of selected cement companies
Conclusions: selected companies UltraTech cement Limited and Shree Cement Limited has bad performance in liquidity where as good performance was observed in profitability, inventory, investment and debtors' management
- Author:** Dr. G. Kanagavalli and R. Saroja Devi
Year: 2018
Industry: Automobile industry
Tools used: Ratio analysis
Examination: Financial performance
Conclusion: Positive strong relationship of liquidity ratio and little risk for companies for meeting long term liabilities has been observed. Hero MotoCorp has high efficiency or turnover ratio and profitability ratio



also. Upon a comprehensive examination of all the facets relevant to the research, it was concluded that Bajaj Auto and TVS Motors are deemed acceptable, while Hero MotoCorp maintains a strong market position.

- Author:** Dr. K. K. Ramachandran and M. Madhumathy
Year: 2016
Industry: Textile Industry
Tools Used: Percentage analysis and multiple correlation tests
Examination: Capital structure and financial performance of textile industry
Conclusion: The analysis reveals that Century Enka Limited and Page Industries Limited offer a greater level of financial security to creditors when compared to Nitin Spinners Limited and Kitex Garments Limited. Page Industries Limited and Ambika Cotton Mills Limited exhibit efficiency in their business operations, leading to a healthy net profit margin. Page Industries Limited outperforms all other companies in terms of yield on capital, return on equity, and earnings per share. Century Enka and Ambika Cotton Limited have effectively managed their assets, resulting in higher company earnings. It's worth noting that there is a negative correlation among net profit margin, return on capital employed, return on equity, return on assets, and earnings per share.
- Author:** Mustafa Hassan Mohammad Adam
Year: 2014
Industry: Banking Industry
Tools Used: Financial Ratios, statistical measures for correlation
Examination: Evaluation of financial performance
Conclusion: The study's results indicate a favourable financial outlook for Erbil Bank, with certain financial variables playing a significant role in shaping the bank's financial performance. Furthermore, it is evident that Erbil Bank's overall financial performance is on an upward trajectory, as evidenced by improvements in liquidity ratios, asset quality indicators, credit performance, and profitability metrics such as Net Profit Margin (NPM), Return on Assets (ROA), and Return on Equity (ROE). Based on these findings, the study offers a series of recommendations aimed at enhancing various banking operations, which can lead to increased profitability and an overall improvement in the bank's financial performance.
- Author:** Zawadi Ally
Year: 2013
Industry: Banking Industry
Tools used: Ratio analysis and ANOVA
Examination: Financial Performance assessment
Conclusions: The research discovered that the overall financial performance of banks experienced substantial growth during the initial two years of the analysis. A noticeable shift in the pattern occurred with the advent of the global financial crisis from 2008 to 2009. Nevertheless, the banking sector in Tanzania

remained steady, with banks maintaining adequate capitalization, profitability, and financial health. The study also revealed that there is no significant variation in profitability among peer bank groups in terms of Return on Assets (ROA). However, there are significant differences in terms of Return on Equity (ROE) and Net Interest Margin (NIM) among these bank groups.

- Author:** Akram Alkhatib
Year: 2012
Industry: Banking industry
Tools used: Return on assets, Tobin's Q model and economic value addition employing correlation and multiple regression analysis
Examination: financial performance of 5 Palestinian commercial banks
Conclusion: it was concluded that there exists statistically significant impact of bank size, credit risk, operational efficiency and asset management on financial performance of Palestinian commercial banks.

Summary of above reviews

It can be concluded that financial performance analysis has been undertaken in fields such as fertilizer industry, telecom industry, pharmaceutical industry, plastic industry, cement industry, steel industry, banking industry, textile industry and even automobile industry with tools such as ratio analysis, Return on assets, Tobin's Q model, economic value addition, correlation, multiple regression analysis, ANOVA, predictive analysis, financial leverages, DuPont Model, Percentage analysis, measures of central tendency, principal component analysis, Trend analysis, Altman Z Score analysis as well as measures of dispersion.

8. CONCLUSION

This research paper reveals that financial performance analysis have been undertaken by researchers in almost all industries but the difference in the researches lies in the fact that there are different methods of analysis employed by different researchers. This paper is a precise summary of different research approaches utilised in financial performance analysis useful for researchers in advancing their study in appropriate direction.

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KATANGIANG PANLINGGUWISTIKO NG MGA SANAYSAY SA FILIPINO 8

Jacrei G. Asi, Helen Tolete

Secondary School Teacher II, Ibabang Talim Integrated High School, Lucena City

ABSTRAK

ASI, JACREI GARCIA. "KATANGIANG PANLINGGUWISTIKO NG MGA SANAYSAY SA FILIPINO 8". Di-Limbag na Masteradong Tesis. Kolehiyo ng Sacred Heart ng Lungsod ng Lucena, Inc., Disyembre 2023. (Helen E. Tolete, PhD, Tagapayo).

Naglalayon ang pananaliksik na masuri ang mga katangiang panlingguwistikong makikita sa mga sanaysay sa Filipino 8. Isa sa mga paksang pinag-aaralan sa Filipino 8 ang pagsulat ng sanaysay gamit ang iba't ibang katangiang panlingguwistiko. Ang mga isinulat na sanaysay ng mga mag-aaral sa Filipino 8 ang naging korpus ng pag-aaral. Pumili ang mananaliksik 30 sanaysay batay sa instrumentong ginamit sa pag-aaral. Sinuri ng mananaliksik ang mga nakalap na sanaysay sa pamamagitan ng kuwalitatibong dulong at deskriptibo-analitikong disensyo ng pananaliksik. Matapos ang naging pagsusuri sumangguni ang mananaliksik sa mga dalubhasa sa larangan ng lingguwistika at pagsulat sa Filipino upang maipabalido ang isinagawang pagsusuri.

Nabatid sa kinalabasan ng pagsusuri na naglalaman ng iba't ibang ibang kayarian ng salita ang mga sanaysay. Nabatid na gumamit ng iba't ibang bahagi ng pananalita ang mga mag-aaral sa kaniilang mga sanaysay kagaya ng pangngalan, panghalip, pandiwa, pang-uri, pang-abay, pangatnig, pang-ukol, pang-angkop at pantukoy. Natukoy ang mga naging gampanin ng iba't ibang uri ng parirala at sugnay sa pagbuo ng pangungusap Batay pa rin sa kinalabasan ng pagsusuri may iba't ibang uri ng mga pangungusap ayon sa kayarian ang nakita sa mga sanaysay, tulad ng payak na pangungusap na pinakakaraniwang anyo ng pangungusap na ginamit sa mga sanaysay at may ilang tambalang pangungusap at hugnayang pangungusap. Natukoy ang iba't ibang uri ng pangungusap ayon sa gamit at ang pangungusap na paturo ang pinakamadami sa mga ito. Batay sa kinalabasan ng isinagawang pagsusuri, nabuo ang awtput ng pag-aaral na isang gabay sa pagsulat ng sanaysay sa Filipino. Base sa mga resultang inilalahad nabuo ng mananaliksik ang mga sumusunod na konklusyon, naglalaman at binubuo ng iba't ibang katangiang panlingguwistiko sa larangan ng morpolohiya at sitaksis ang mga sanaysay sa Filipino 8. May iba't ibang komunikatibong gamit ang mga katangiang panlingguwistiko ginamit at nakita sa mga sanaysay ng mga mag-aaral at maaaring makabuo ng isang materyal tulad ng gabay sa pagsulat ng sanaysay sa Filipino batay sa pagsusuri ng katangiang panlingguwistiko ng mga akdang pampanitikan.

MGA SUSING SALITA: gabay sa pagsulat ng sanaysay, katangiang panlingguwistiko, sanaysay

I. PANIMULA

Isa sa mga mahahalagang kasanayan na dapat malinang ng bawat indibidwal ang pagsulat. Mahalaga ang pagsulat sapagkat lundayan ito ng lahat ng iniisip, nadarama, nilalayon at pinapangarap ng tao (Badayos, 2014). Kinakalangang mapaunlad ng bawat mag-aaral ang kanilang kaalaman at kasanayan sa pagsulat gamit ang sariling wika upang epektibong maipahayag ang kanilang pananaw, saloobin at ideya tungkol sa isang paksa. Isa ito sa mga adhikain ng pagtuturo ng Filipino sa mga paaralan. Marami sa mga kasanayang pampagkatuto sa kasalukuyang kurikulum sa asignaturang Filipino ang nakatuon sa pagpapaunlad ng kakayahan at kasanayan sa pagsulat. Marami sa mga kasanayang pampagkatuto sa kasalukuyang kurikulum sa asignaturang Filipino ang nakatuon sa pagpapaunlad ng kakayahan at kasanayan sa pagsulat.

Kinapapalooban ito ng mga pagtalakay ng mga akdang pampanitikan at pagsulat ng mga ito gamit ang natutunang mga

alituntuning panlingguwistiko sa Filipino. Nakatutulong sa paglinang ng kaalaman at kasanayan sa wika, kritikal at malikhaing pag-iisip, at pagpapaunlad ng kakayahang komunikatibo ang pagsulat ng iba't ibang teksto o panitikan (Molina, 2015). Sa larangan ng pagsulat, kinakailangang isaalang-alang ang maayos at epektibong pagpapahayag nito upang ganap na matamo ng mga mambabasa ang mensahe ng isinulat na teksto

Mas makakamtan ito kung maisasaalang-alang ng bawat mag-aaral ang mga katangiang panlingguwistiko at mailalapat ito sa kanilang pagsulat. Tumutukoy ang mga katangiang panlingguwistiko o linguistic features sa mga anyo at istruktura ng wika na ginagamit ng isang manunulat upang makamit ang isang partikular na layunin ng komunikasyon at retorika (De Ramos, 2017). May malawak na kaugnayan ang katangiang panlingguwistiko sa paglalapat ng wika sa mga sulatin. Maaaring



maiugnay ito sa paggamit ng mga salita, sa pagbuo ng mga pangungusap at pagbibigay kahulugan sa mga ito. Isa ito sa mga mahahalagang paksang tinatalakay sa Filipino at kadalasang inilalapat sa mga akademikong sulatin gaya ng mga sanaysay.

Isa sa mga panitikang itinuturo at isinusulat ng mga mag-aaral sa pag-aaral ng Filipino ang sanaysay. Isa itong uri ng tuluyang panitikan at naglalaman ng mga mahahalagang pagtalakay sa iba't ibang isyu. Malinaw na nakasaad sa Batayang Pangkurikulum ng Kagawaran ng Edukasyon (2013) na kailangang matutunan at makasulat ang mga mag-aaral ng mga ganitong anyo ng panitikan. Itinuturo ng mga guro sa Filipino ang pagsulat ng mga sanaysay sa lahat ng baitang sa sekundarya. Pokus ng pagtuturo ng sanaysay ang wastong pagsulat nito gamit ang mga katangiang panlingguwistiko sa Filipino. Inaasahan ng Kagawaran ng Edukasyon na may sapat na kaalaman at kasanayan sa pagsulat ng mga akademikong sulatin gaya ng sanaysay ang mga mag-aaral na Pilipino sa pagtatapos nila ng sekundarya.

Gayunpaman kapansin-pansin na marami pa ring mag-aaral sa asignaturang Filipino ang nahihirapan at nakakaranas ng suliranin sa pagsulat lalo na sa wastong paggamit ng mga katangiang panlingguwistiko sa kanilang mga tekstong isinusulat gaya ng sanaysay. Patunay nito ang kinalabasan ng kanilang mean percentage score na 58.63

bahagdan sa ikalawang markahan na may interpretasyong unsatisfactory. Nakakabahala ang resultang ito sapagkat sa markahang ito higit na tinatalakay ang pagsulat gamit ang mga katangiang panlingguwistiko. Nangangahulugan itong kinakailangang magsagawa ang guro ng mga karagdagang pagtalakay at gawain upang mapabuti ang sitwasyon ng mga mag-aaral sa mga paksa at kasanayang nahihirapan sila.

Makakaapekto ang mga gawaing ito sa paglinang ng kasanayang pangkomunikasyon ng mga mag-aaral kaya nararapat na higit bigyang-pansin at kaukulang aksiyon. Malulutasan ang mga ganitong suliranin sa pagsulat kung mababatid ng mga gurong nagtuturo ng wika at pagsulat ang mga hadlang o problemang kinakaharap at nararansan ng mga mag-aaral sa pamamagitan ng pagsusuri ng kanilang mga tekstong isinulat. Ito ang isinagawa ni De Ramos (2017) sa kanyang pananaliksik hinggil sa katangiang panlingguwistiko sa mga akademikong teksto ng mga mag-aaral sa Baitang 10. Isinalaysay niyang mahalagang masuri at mabatid ang mga tekstong naisulat ng mga mag-aaral upang mapagtanto ang mga suliraning kinakaharap at nararansan ng mga ito sa kanilang pagsulat. Sa pamamagitan nito maaaring makabuo ang mga gurong nagtuturo ng pagsulat ng mga angkop na gawaing magpapaunlad sa kanilang kasanayan.

Ito ang nagbunsod sa mananaliksik upang bigyan ng pansin at pokus ng pag-aaral ang kasanayan ng mga mag-aaral sa pagsulat gamit ang iba't ibang katangiang panlingguwistiko. Bilang gurong nagtuturo ng wika at pagsulat lubos na makatutulong ang pag-aaral na ito upang higit na mapagbuti ang pagtuturo ng pagsulat ng mga akdang pampanitikan tulad ng sanaysay. Matapos ang pagsusuri ng mga sanaysay at mabatid ang mga

katangiang panlingguwistikong mababasa sa mga ito, naging batayan ito ng mananaliksik sa pagbuo ng gabay sa pagsulat ng sanaysay sa Filipino. Inaasahang makatutulong ito sa paglinang ng kaalaman ng mga mag-aaral sa mga katangiang panlingguwistiko at pagpapaunlad ng kanilang kasanayan sa pagsulat ng sanaysay.

Paglalahad ng mga Suliranin

1. Ano-anong mga katangiang panlingguwistiko ang makikita sa mga sanaysay sa Filipino 8?
 - 1.1 Morpolohiya;
 - 1.1.1 Kayarian ng Salita,
 - 1.1.2 Bahagi ng Pananalita,
 - 1.2 Sintaksis;
 - 1.2.1 Parirala,
 - 1.2.2 Sugnay,
 - 1.2.3 Uri ng Pangungusap ayon sa Kayarian,
 - 1.2.4 Uri ng Pangungusap ayon sa Gamit,
2. Ano-anong mga komunikatibong gamit ng mga katangiang panlingguwistiko ang nakita sa mga sanaysay sa Filipino 8?
3. Batay sa naging resulta ng pag-aaral, anong gabay sa pagsulat ng sanaysay sa Filipino 8 ang maaaring mabuo?

II. METODOLOHIYA

Tumatalakay ang kabanatang ito sa mga hakbang at pamamaraang ginamit ng mananaliksik upang makalap ang mga kinakailangang datos para maisakatuparan ang pag-aaral. Kabilang dito ang disenyo ng pananaliksik, lugar kung saan isinagawa ang pananaliksik, korpus ng pag-aaral, mga isinagawang paraan sa pangangalap ng datos, pagsusuri ng datos, mga sinangguning interkoder at etikal na konsiderasyong isinagawa.

Disenyo ng Pananaliksik

Gumamit ang mananaliksik ng kuwalitatibong pagdulog at deskriptibo- analitikong pagsusuri upang masagot ang mga inilalahad na suliranin ng pananaliksik. Batay kay Packer (2010) higit na nakatuon ang kuwalitatibong dulog ng pananaliksik sa pagbibigay kahulugan at interpretasyon sa mga katangiang pangyayari, pamamaraan, penomenon at sitwasyong sinuri gamit ang mga hindi *numerical* na datos. Ito ang proseso at pamamaraang ginamit ng mananaliksik sa pagsusuri ng mga nakalap na sanaysay.

Gumamit ng deskriptibo-analitikong pamamaraan ang mananaliksik sa pag-aaral na ito upang masuri ang mga katangiang panlingguwistiko Nakita sa mga sanaysay. Ayon kay Cote (2021) sa deskriptibo-analitikong proseso ng pagsusuri binibigyang interpretasyon ang mga nakalap na datos sa pamamagitan ng paghahambing ng mga ito at pagpapakita ng ugnayan ng bawat isa. Ginamit ng mananaliksik ang disenyo ng ito sa pagsagot ng mga katanungang inilalahad sa pag-aaral.



Lugar ng Pananaliksik

Isinagawa ang pag-aaral na ito sa isa sa mga paaralan sa sekundarya sa Sangay ng Lungsod ng Lucena. Napili ng mananaliksik ang paaralan bilang lokal ng pag-aaral sa kadahilanang nabatid niya na may mababang antas ng kasanayan at kaalaman ang mga mag-aaral sa pagsulat gamit ang Filipino. Naging batayan ng mananaliksik ang kinalabasan ng pagsusuri sa *mean percentage score* ng mga mag-aaral sa asignaturang Filipino sa nakaraang taon. Sa ikalawang markahan kung saan tinatalakay ang mga katangiang panlingguwistiko may nakuha lang na 58.63 bahagdan ang mga mag-aaral sa Baitang 8 at may deskripsyo itong hindi kasiyasiya. Batay dito nangangailangan ng mga interbensiyong gawain ang mga mag-aaral sa paaralan upang mas mapabuti ang kanilang kaalaman at kasanayan sa asignatura partikular na sa pagsulat gamit ang iba't ibang mga katangiang panlingguwistiko.

Korpus ng Pag-aaral

Gumamit ang mananaliksik ng mga sanaysay na isinulat ng mag-aaral sa Baitang 8 bilang korpus ng pag-aaral. Napili ng mananaliksik ang sanaysay bilang korpus na pag-aaral at ang suriing panitikan sapagkat isa ito sa mga mahahalagang akademikong sulatin isinasagawa ng mga mag-aaral sa asignaturang Filipino. Isa itong anyo at uri ng panitikan na naglalahad ng mapanuring opinyon, pananaw at mga saloobin ng may akda o ng isang institusyon hinggil sa isang napapanahong isyu o paksa.

Isa mga paksang itinuturo sa asignaturang Filipino 8 ang pagsulat ng sanaysay. Kabilang ito sa mga kasanayang pampagkatutong nakasaad sa kurikulum sa Filipino at isa sa mga akademikong sulating isinasagawa at ipinapasa sa asignatura. Batay sa gawaing pampagkatuto na nakapaloob sa *self-learning module* mula sa Kagawaran ng Edukasyon ang mga isinulat na sanaysay ng mga mag-aaral. Ayon sa kompetensi sa Filipino 8, inaasahang nakapipili ang mga mag-aaral ng isang napapanahong paksa sa pagsulat ng isang sanaysay (F8PU-IIf-g-27). Ang kompetensiyang ito ang nag-uutos at nagging basehan upang magsulat ang mga mag-aaral ng sanaysay na nagging korpus ng pag-aaral. Pumili ang mga mag-aaral sa mga nakalahad na paksa sa modyul at sumulat sila ng sanaysay tungkol dito. Ang mga paksa o temang pinagpilian ng mga mag-aaral ay: Edukasyon sa Panahon ng Pandemya; *Mental Health* ng Kabataan sa Bagong normal; Pagkakaralbo ng mga Bundok at Kagubatan; at Pagkahumaling ng Kabataan sa *Social Media*. May kabuuang tatlumpong sanaysay ang sinuri ng mananaliksik. Batay kina Griffin at Hasser (2000) na ginamit sa pag-aaral ni Andrey at naging batayan din ni Del Rio (2017) ang mungkahing nasa 30 hanggang 40 ang bilang ng korpus na dapat gamitin sa isang lingguwistikong pananaliksik. Nasa anyong deskriptibo ang mga sinulat na sanaysay ng mga mag-aaral. Isa itong anyo ng sanaysay na may layong maglarawan o magbigay katangian sa isang paksang pinag-uusapan.

Sa pag-aaral na ito sinuri ng mananaliksik ang mga katangiang panlingguwistikong mababasa sa mga nakalap na deskriptibong sanaysay. Sinuri rinang mga komunikatibong gamit ng mga ito na

nagging batayan sa pagbuo ng isang gabay sa pagsulat ng sanaysay.

Paraan ng Pangangalap ng Datos

Sumangguni at humingi ng pahintulot ang mananaliksik sa Tagapamuno ng Sangay ng Lungsod ng Lucena atulongguro ng paaralan pinagsagawaan ng pananaliksik upang makalap ang mga kinakailangang datos sa pagsasagawa ng pananaliksik. Nagpadala ng liham-pahintulot ang mananaliksik saulongguro ng paaralan upang malayang maisagawa ang pananaliksik at magamit ang mga mag-aaral nito bilang kalahok ng pag-aaral.

Nagpasulat ang mananaliksik sa mga mag-aaral ng sanaysay sa Baitang 8 ng naturang paaralan. Bahagi rin ito ng kanilang pag-aaral at kinakailangang awtput sa Filipino 8. Nakasaad sa kanilang kasanayang pampagkatuto sa ikalawang markahan na inaasahang nakapipili ang mga mag-aaral ng isang napapanahong paksa sa pagsulat ng isang sanaysay (F8PU-IIf-g-27). Batay sa kompetensiyang nabanggit nagsulat ang mga mag-aaral ng mga deskriptibong sanaysay mula sa mga temang nakalahad sa kanilang *self-learning module*.

Kinolekta ng mananaliksik ang mga isinulat na sanaysay ng mga mag-aaral upang maging korpus ng pag-aaral. Muling nakipag-ugnayan ang mananaliksik sa gurong tagapangasiwa ng Kagawaran ng Filipino ng paaralan upang magamit sa isinasagawang pag-aaral ang mga sanaysay na isinulat ng mga mag-aaral. Kagaya ng ginawa ng mananaliksik sa unang proseso ng pagkalap niya ng datos, nagbigay muli ito ng liham sa tagapangasiwa ng kagawaran upang pahintulotan itong gamiting korpus ng pag-aaral ang nasulat na akademikong sulatin ng mga mag-aaral.

Matapos ang isinagawang pagsusuri sa mga sanaysay, nagtunggo at sumangguni ang mananaliksik sa mga dalubhasa sa Filipino upang maipabalido ang isinagawang pagsusuri. Nagkaroon ng mga rebisyon at pagbabago sa unang isinagawang pagsusuri ng mananaliksik batay sa mga mungkahi, komento at puna ng mga sinangguning eksperto. Sinuod na isinagawa ang pagbuo ng awtput ng pag-aaral na gabay sa pagsulat ng sanaysay sa Filipino. Binuo ito batay sa kinalabasan ng isinagawang pagsusuri sa mga katangiang panlingguwistiko nakita sa mga sanaysay.

Isinagawa ng mananaliksik ang iba pang panganagalap ng datos sa pagtungo nito sa mga silid-aklatan ng iba't ibang paaralan at pamantasan. Isinagawa niya ito sa pamamagitan ng paghingi ng liham-pang-endorso mula sa gurong-tagapagayo nito sa pananaliksik at sa dekana ng gradwadong edukasyon ng *Sacred Heart College*.

Pagsusuri ng Datos

Sinuri ng mananaliksik sa pag-aaral na ito ang mga nalikom na sanaysay sa Filipino ng mga mag-aaral sa Baitang 8. Nakapokus ang pagsusuri sa mga katangiang panlingguwistiko makikita sa mga sanaysay at naging komunikatibong gamit ng mga ito. Naging batayan ng mananaliksik sa pagsusuri ng mga katangiang



panlingguwistiko ang mga naunang pag-aaral nina De Ramos (2017) at Oliveros (2019). Sa kanilang mga pananaliksik ipinakita ang mga naging gampanin ng iba't ibang katangian panlingguwistiko sa pagbuo ng isang akademikong sulatin.

Unang sinuri ang mga katangiang panlingguwistiko sinasaklaw ng morpolohiya. Sinuri ang unang baryabol nitong kayarian ng salita sa pamamagitan ng pagtukoy ng mga salitang ginamit at isinulat sa mga sanaysay. Itinala ng mananaliksik ang iba't ibang salita mula sa sanaysay at ikinategorya ang mga ito batay sa kanilang kayarian. Gumamit ang mananaliksik ng talahanayan upang maipakita at maiuri ang iba't ibang halimbawa ng kayarian ng salitang nakita sa mga sanaysay. Gayundin inalam ng mananaliksik ang bilang ng bawat kayarian ng salitang nagamit sa sanaysay at mga naging gampanin nito sa mga pangungusap.

Kabilang din sa baryabol na morpolohiya ang bahagi ng pananalita. Sa pamamagitan ng mga katanungan sa ginamit na instrumento ng pag-aaral sinuri ng mananaliksik ang iba't ibang bahagi ng pananalita na makikita sa mga sanaysay. Itinala nito ang iba't ibang bahagi ng pananalita na ginamit at nakita sa mga sanaysay tulad ng pangngalan, panghalip, pandiwa, pang-uri, pang-abay, pang-ukol, pangatnig, pang- angkop at pananda. Gumamit ang mananaliksik ng talahanayan upang maipakita ang iba't ibang halimbawa ng bahagi ng pananalita mula sa mga isinulat na sanaysay ng mga mag-aaral. Sinuri ng mananaliksik ang bawat bahagi ng pananalita sa pamamagitan ng pagbibigay ng kahulugan at pagkakaiba ng mga ito. Pinaghambing at binigyang interpretasyon ang bawat isa sa pagtalakay.

Sa bahagi ng sintaksis naging pokus ng pagsusuri ang mga parirala, sugnay at iba't ibang uri ng mga pangungusap na mababasa sa mga sanaysay. Sa pamamagitan ng talatanungan sinuri ang bawat isa. Sa unang baryabol na parirala, itinala ng mananaliksik ang iba't ibang parirala at inihanay sa uring kinabibilangan ng mga ito. Ipinakita din sa pagsusuri ang naging paggamit ng mga ito sa mga sanaysay. Sinuri ang sugnay batay sa katanungan mula sa instrumento ng pag-aaral. Ipinakita ng mananaliksik ang iba't ibang pangungusap na kinakitaan ng paggamit ng mga sugnay at pinaghiwalay ang mga ito gamit ang talahanayan. Binigyang interpretasyon ang mga sugnay batay sa mga naging gamit ng mga ito sa pangungusap.

Sa parehong proseso sinuri ang iba't ibang uri ng pangungusap ayon sa gamit at kayarian. Itinala ng mananaliksik ang iba't ibang mga pangungusap mula sa mga sanaysay. Mula sa mga ito sinuri at ikinategorya ng mananaliksik ang bawat isa ayon sa kayarian at gamit. Ikinategorya sa tatlo ang mga pangungusap ayon sa kayarian, ang payak, tambalan o hugnayang pangungusap. Gayundin ikinategorya ang mga ito batay sa gamit na maaaring ginamit bilang paturo, patanong, pautos at padamdang.

Matapos ang isinagawang pagsusuri sa mga katangiang panlingguwistikong nakita sa mga sanaysay sunod na binigyang pagsusuri ng mananaliksik ang mga naging komunikatibong

gamit ng mga ito. Itinala ng mananaliksik Ang bawat katangiang panlingguwistiko nakalahad sa suliranin ng pag-aaral. Inilahad din niya ang naging komunikatibong gamit ng bawat isa. at nagpakita ng mga halimbawa sa huling hanay. Sinuri at binigyang interpretasyon ang mga ito sa pamamagitan ng mga kaugnay na literatura at pag-aaral. Tinalakay at mababasa sa ikalawang kabanata ng pag-aaral na ito ang mga kaugnay na literatura at pag-aaral na ginamit sa pagsusuri. Ginamit ng mananaliksik ang kinalabasan ng pagsusuri ng datos at mga nakalap na kaugnay na literatura sa pagbuo ng gabay sa pagsulat ng sanaysay sa Filipino.

Interkoder

Sumangguni ang mananaliksik sa mga dalubhasa at natatanging indibidwal na may kaalaman at mahusay na kasanayan sa paksa ng isinagawang pag-aaral. Humingi ng tulong ang mananaliksik sa apat na guro sa Filipino. Nagbigay ng liham ang mananaliksik sa mga naturang guro upang hingin ang kanilang tulong at maaaring mga maging mungkahi sa isinagawang pagsusuri. Tatlo sa mga ito ang dalubguro sa Filipino at isang gurong nagtuturo ng Filipino 8. Nakapag-aral ang lahat ng gurong sinangguni ng Master ng Sining ng Edukasyon Medyor sa Filipino. Isa ang may digri at nakapagtapos ng Doktor ng Pilosopiya sa Filipino. Sa tulong ng mga naturang eksperto ipinabalido ang pagsusuring ginawa ng mananaliksik sa mga sanaysay. Matapos maipabalido ang isinagawang pagsusuri nagpapirma ang mananaliksik ng sertipiko ng pagpapatibay bilang patunay na dumaan sa balidasyon ng mga dalubhasa ang naging pagsusuri sa mga sanaysay. Sa pamamagitan ng kanilang mga mahahalagang puna, komento, kritisismo at mungkahi nasagot ang mga suliraning nakalahad sa pananaliksik at matagumpay na naisakatuparan ang pag-aaral.

Etikal na Konsiderasyon

Naisakatuparan ang pag-aaral na ito sa tulong at kooperasyon ng mga bawat indibidwal na bumubuo sa paaralan kung saan isinagawa ng mananaliksik ang pangangalap ng datos. Unang humingi ng pahintulot ang mananaliksik sa Tagapamuno ng Sangay ng Lungsod ng Lucena na makapagsagawa ng pag-aaral sa isa mga paaralang nasasakupan ng kanyang pamunuan. Nang maphintulutan ito, sunod na lumapit at humingi ng pahintulot ang mananaliksik sa ulonnguro ng paaralan upang magamit ang mga sanaysay na isinulat ng mga mag-aaral.

Malinaw na ipinahayag sa liham-pahintulot ang layunin at intensyon ng pag-aaral gayundin ang pagtitiyak na tanging gagamitin lang sa isinasagawang pananaliksik ang mga makakalap na datos. Pinahintulatan ito ng punongguro at mga gurong tagapayo ng bawat klase sa Baitang 8. Tiniyak ding mananatiling lihim at hindi ipapaalam ang ang mga pangalan ng mga mag-aaral na sumulat ng mga sanaysay. Matapat na sinuri ng mananaliksik ang mga sanaysay batay sa inilahad na mga katanungan at layunin ng pag-aaral. Malugod na ipinakita ng mananaliksik ang kinalabasan ng pagsusuri, mga nahinuhang konklusyon at nabuong awtput sa mga gurong bumubuo ng paaralan. Iminumungkahi magamit at malapat ang kinalabsan ng pag-aaral sa paaralan upang higit na mapaunlad ng mga mag-aaral



kanilang kasanayan sa pagsulat ng sanaysay gamit ang iba't ibang katangiang panlingguwistiko.

III. BUOD NG KINALABASAN, KONKLUSYON, AT REKOMENDASYON

Naglalalahad ang kabanatang ito ng buod ng kinalabasan ng pag-aaral, konklusyon na nagmula sa kinalabasan ng pag-aaral at mga rekomendasyon ng mananaliksik.

May pangkalahatang layunin ang pag-aaral na itog mabatid ang iba't ibang katangiang panlingguwistikong makikita sa mga sa sanaysay sa Filipino 8 at masuri ang mga naging komunikatibong gamit ng mga ito. Batay sa naging resulta ng pagsusuri ng mga katangiang panlingguwistiko nakita sa mga sanaysay binuo ang isang gabay sa pagsulat ng sanaysay sa Filipino.

Buod ng Kinalabasan

Ang mga sumusunod ang naging kinalabasan ng isinagawang pagsusuri sa mga nakalap na sanaysay sa Filipino 8.

1. Matapos malikom at masuri ng mananaliksik ang mga katangiang panlingguwistiko sa mga sanaysay ng mga mag-aaral, ang sumusunod ang kinalabasan:

1.1 Morpolohiya

1.1.1 Kayarian ng Salita

Kinakitaan ang mag sanaysay ng paggamit ng iba't ibang kayarian ng salita. Pinakamadami ang nasa kayariang maylapi, pangalawa ang mga payak na salita, sinusundan ito ng mga salitang inuulit at iilan lang ang tambalang salita. Ginamit sa pagbuo ng mga pangungusap ang mga iba't ibang kayarian ng salita.

1.1.2. Bahagi ng Pananalita

Sa bahagi ng pananalita, kinakitaan ang mga sanaysay nang mayaman na paggamit ng iba't ibang habagi ng pananalita gaya ng pangngalan, panghalip, pandiwa, pang-uri, pang-bay, pangatnig, pang-ukol, pang-angkop at pantukoy.

1.2. Sintaksis

1.2.1 Parirala

Ang ilan sa mga pariralang naging prominante at ginamit ng mga mag-aaral sa kanilang mga sanaysay ang mga pariralang pawatas, pariralang pang-ukol, pariralang pang-abay at pariralang pang-uri.

1.2.2. Sugnay

Nagamit ng mga mag-aaral sa kanilang pagsulat ang dalawang uri ng sugnay, ang mga sugnay na makapag-iisa at ang sugnay na di makapag-iisa. Iilan sa mga sinuring sanaysay ang maayos na nailapat ang iba't ibang gamit ng sugnay na di makapag-iisa.

1.2.3. Uri ng Pangungusap Ayon sa Kayarian

Sa uri ng pangungusap ayon sa kayarian, pinakamadami ang mga payak na pangungusap, sinusundan ito ng mga hugnayang pangungusap at iilang tambalang pangungusap. May dibersidad at barayti ang mga ginamit na pangungusap sa mga sanaysay.

1.2.4. Uri ng Pangungusap Ayon sa Gamit

Sa uri ng pangungusap ayon sa gamit, ang pangungusap na paturul o pasalaysay ang pinakaginamit at pinakamadami sa mga naisulat ng mga mag-aaral. May ilang pangungusap na patanong samantalang sobrang dalang o kakaunti lang ang mga pangungusap na pautos at padamdad.

2. Nagkaroon ng iba't ibang komunikatibong gamit ang mga katangiang panlingguwistiko nakita at ginamit sa sanaysay.

3. Nabuo ang awtput ng pag-aaral na isang gabay sa pagsulat ng sanaysay sa Filipino 8. Naglalaman ito ng mga mungkahi at pagtalakay tungkol pagsulat ng sanaysay gamit ang iba't ibang katangiang panlingguwistiko.

Konklusyon

Batay sa resulta ng pag-aaral na ito, nabuo ang mga sumusunod na konklusyon:

1. Naglalaman at binubuo ng iba't ibang katangiang panlingguwistiko sa larangan ng morpolohiya at sitaksis ang mga sanaysay sa Filipino 8.
2. May iba't ibang komunikatibong gamit ang mga katangiang panlingguwistiko ginamit at nakita sa mga sanaysay ng mga mag-aaral sa Filipino 8.
3. Maaaring makabuo ng isang materyal tulad ng gabay sa pagsulat ng sanaysay batay sa pagsusuri ng katangiang panlingguwistiko ng mga akdang pampanitikan.

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PLANTS UNDER THE RISK DROUGHT AND DESERTIFICATION IN SOUTHEASTERN ANATOLIA (TURKEY)

Sibel ÖZÜTÜRK

Istanbul University, Institute of Social Sciences, Department of Geography

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ABSTRACT

This study examines the impact of climate change on the semiarid region of Southeastern Anatolia, Turkey, which borders the northern Arabian deserts. The region faces significant risks of desertification due to the expansion of arid zones, affecting precipitation, evaporation, water resources, and vegetation. The loss of biodiversity is already a critical issue, exacerbated by drought conditions. Agricultural productivity is threatened as drought reduces water availability, leading to lower yields and quality of crops. Economic consequences include increased food prices, farmer losses, and potential migration. The study aims to identify at-risk agricultural products and propose measures to combat drought and ensure food security.

KEY WORDS: *Climate change, drought, desertification, soil, evaporation, endangered species*

INTRODUCTION

This semiarid area corresponding to the southeastern corner of Turkey also forms the border with the northern belt of the Arabian deserts (Figure 1). The climate changes that are taking place will deeply affect this region. Especially this semiarid location bordering the desert belt carries the risk of desertification with the

expansion of the main arid region to the north. This will affect climate elements such as precipitation and evaporation, then water resources and vegetation. In this case, the vegetation that will not be able to survive will also be in question. Similarly, some agricultural products will no longer grow under natural conditions.



Figure 1: Location Image

Even now, a large part of the area is at very high risk of biodiversity loss. Biodiversity loss will be exacerbated by drought (Figure 2).

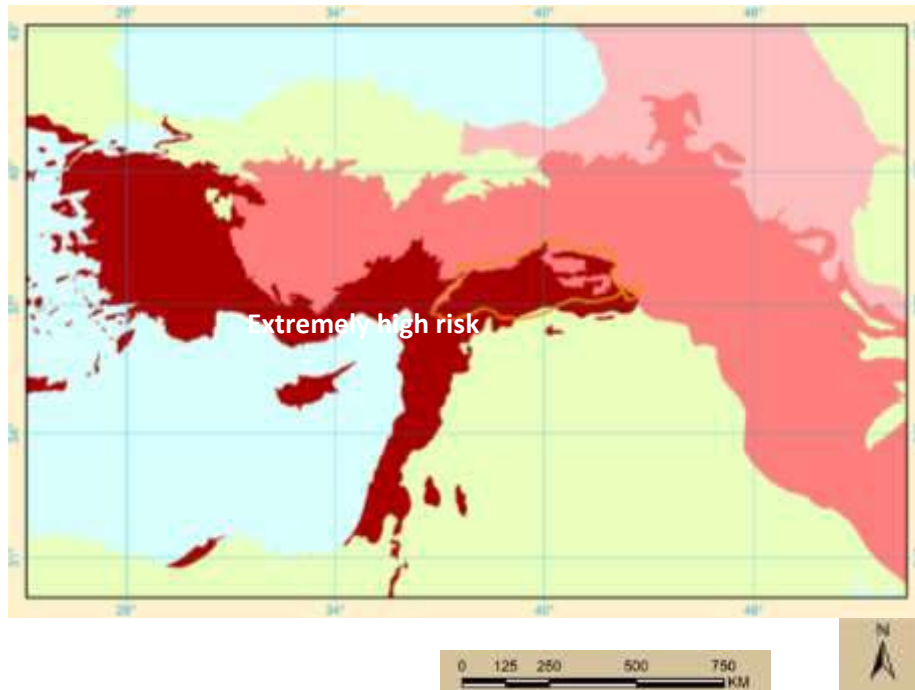


Figure 2: Biodiversity Risk Status in the Study Area and Its Surrounding Area

Depending on the degree of drought, there may be quite negative effects on agricultural products. For example, drought causes the water required for plant growth to decrease. This leads to the plants not being able to get enough nutrition and therefore to a loss of yield. Lack of water can negatively affect the development of plants and cause the quality of the product to decrease. For example, the size of fruits and vegetables may decrease or their taste may change. Drought may cause the cultivation areas to shrink and some products to not be grown at all. This reduces the overall yield. Possible climate changes may cause this (Ekinici, 2024). The decrease in agricultural products may lead to an increase in food prices and the economic losses of farmers and migration. Drought endangers the food supply and puts food security at risk. This situation can lead to serious problems, especially in regions that are not resistant to drought. Species may disappear. It is possible that the amount of salinity, evaporation and transpiration in the soil will increase, water resources will shrink and eventually epidemics and migrations will occur. Apart from this painful picture, the gastronomic culture of the region will also be deeply affected.

Aim

Diet varies from country to country according to culture, climate and conditions. It varies among human communities living in different geographies in the same country and even in the same city. The purpose of the study is to evaluate which agricultural products are at risk as a result of drought that may occur in this area due to the ongoing climate changes. In this respect, it is necessary to evaluate agricultural products that may have problems in production and to implement the necessary

precautions. In the face of a possible mass extinction caused by global climate changes (Ekinici, 2024), we must target research ways to combat drought now and take rapid steps in this direction.

General Climatic Characteristics of the Study Area

The climate conditions in Southeastern Anatolia reflect the characteristics of a continental steppe climate. The fact that the lowest temperatures and precipitation are concentrated in the winter season, while the summer season is very hot and dry, despite some local differences in precipitation, reveals the existence of a Mediterranean-type precipitation regime in the region.

In terms of annual average temperatures, Southeastern Anatolia, together with the Mediterranean and Aegean coasts, undoubtedly constitutes one of the hottest regions in Turkey. The annual average temperature in the Southeastern Anatolia Region varies between 16-22 degrees. In the southern belt, both the proximity to the equator and the altitude values have allowed the temperature to reach 22 degrees. As we go north, both the decrease in the angle of incidence of sunlight and the increase in altitude cause these high values to drop to 16 degrees.

The average temperature values recorded in the region show a gradual increase from north to south and from east to west. For this reason, the temperature values of the provinces in the north are lower. In this respect, Urfa: 18.2 C°, Mardin: 16.0 C°, Diyarbakır: 15.7 C° can be given as examples. The highest temperature is seen in July with 31°C, and the lowest in January.



July is the sunniest month in the Southeastern Anatolia Region with 12 hours a day. December and January have the lowest values in this respect.

In this region of our country that heats up the fastest and most in the summer season, it is known that the average July is around 30.0 °C (Siirt: 30.4 °C, Diyarbakır: 31.0 °C, Urfa: 31.7 °C, Gaziantep: 27.1 °C). This issue is related to the high degree of continentality. Because in this region, which heats up very much in the summer months, the winter season is quite cold and the annual temperature difference varies between 25.0 °C and 27.5 °C. These figures show that the annual temperature difference is greater in this region, as in the Northeastern Anatolia region, than in Central Anatolia. The values related to the high temperatures reached in the summer season also support this issue. In fact, the highest absolute temperatures measured in Turkey so far belong to this region: Diyarbakır and Urfa: 46.2 °C. The extreme values recorded in the region reflect the interesting thermal characteristics of a steppe climate in the winter season, as in the summer season. (Erinç, S. 1957).

These extreme values show that the thermometer can often fall below zero in October, November, December, January, February, March and April, and even very low temperatures can be detected in the winter months. The following figures regarding the lowest temperatures show that the annual average temperature difference of around 25.0 °C-27.5 °C can increase approximately two-fold in abnormal winters: Diyarbakır-24.2 °C (January), Mardin-12.0 °C (February), Urfa-12.4 (February), Gaziantep-17.5 (January). The above thermal values undoubtedly affect the distribution of frosty days throughout the year. The months with the highest number of frosty days in the region are December, January, February and March. This frosty period loses its effect in early April and spring season suddenly begins. The number of frost days (regional average: 45 days), which is of great importance in terms of both agriculture and hydrology, is related to the high degree of continentality. In the northern and western parts of the region, frost events show a certain increase depending on thermal conditions (Diyarbakır: 68 days, Siirt: 48 days, Mardin: 37 days, Urfa: 27 days and finally Gaziantep: 58 days). As for the start and end dates of frost events in the region, it can be said that this varies between October 1-15 and April 1-15. Based on 22 years of observations, ERİNÇ records that the minimum number of frost days in Diyarbakır is 40, the maximum is 104 days and the earliest frost date is determined as October 7 and the latest frost date is determined as April 17 (17). The fact that evaporation is very low in this season (Diyarbakır January average: 26.9 mm) and the vapor pressure is low can be put forward as factors that aggravate the frost event. This frosty period is undoubtedly much shorter in the Mesopotamian plains located further south (Erinç, S. 1957). Annual rainfall amounts in Southeastern Anatolia generally decrease gradually from the Southeastern Taurus Mountains towards the Syrian platform (Figure 21). Annual rainfall amounts, which vary between 800-1250 mm on the Southeastern Taurus Mountains arc, are mostly between 450-500 mm in the areas

located south of it. This amount decreases even more towards the Syrian border (Ceylanpınar: 271.5 mm) and prepares the conditions for a desert-like steppe. The role of landforms in this regard is clear, for example, while the Diyarbakır basin receives 400-500 mm of precipitation, the Karacadağ volcanic mass on its western edge receives 600-800 mm. The same situation can be observed at the Mardin (elevation: 1150 m) and Nusaybin (elevation: 500 m) meteorological stations. The difference in annual precipitation between these two stations, which are very close to each other, is 230 mm (Mardin: 685.8 mm, Nusaybin, 454.4 mm), (Erinç, S. 1957).

In terms of the number of rainy days, January offers the rainiest days with 10 days, while August has the fewest. The least precipitation falls in August with only 0.0 mm of precipitation. January is the month with the most precipitation.

The month with the most precipitation in Southeastern Anatolia is January (Diyarbakır: 79.2 mm, Siirt: 116.4 mm, Mardin: 133.5 mm, Urfa: 104.2 mm), and the month with the least precipitation is August (Diyarbakır: 0.5 mm, Siirt: 0.5 mm, Mardin: 0.6 mm, Urfa: 0.6 mm). The largest share of the region's annual precipitation falls in the winter season (Diyarbakır: 45%, Siirt: 42%, Mardin: 50%, Urfa: 55%). The share falling in the summer season is very small (1-2%) and in some years no precipitation is even recorded. Since the temperature reaches very high degrees in this season, a severe drought prevails. It is seen that the annual precipitation after the winter season is mostly collected in the spring months (Diyarbakır: Siirt: 37%, Mardin: 34%, Urfa: 30%). With these features, Southeastern Anatolia is located in a deteriorated Mediterranean precipitation regime area (Erol, O. 1992).

The annual average number of rainy days in the Southeastern Anatolia region varies between 70 and 90 days. The distribution of these days is in full compliance with the annual course of precipitation. The months with the least precipitation are July and August (1 day), while the months with the most precipitation are January (12-14 days) and March (14 days). In fact, the months with the highest precipitation values are also concentrated in winter and spring. All these issues testify to the existence of a certain precipitation maximum in the region, extending from winter to spring. January, when the relative humidity is 75% on average, is the most humid month. In July, the relative humidity is at its lowest level.

All these figures reveal the existence of a severe arid-semiarid steppe climate in the region. It can be said that a very hot summer period, intense evaporation and summer drought, a low humidity and cloudiness degree constitute the main characteristics of this climate type.

It is known that Southeastern Anatolia occupies a very important place among our arid regions. The duration of the dry period in the region is about 6-7 months. This period, together with the



Mediterranean and Southern Aegean coastal zones, constitutes one of the areas with the longest dry period in Turkey. A dry area that occurs locally around Urfa in April gradually covers the whole of Southeastern Anatolia, increases its intensity in July and continues until the end of October. During this long period when high temperatures are recorded, irrigation becomes a necessity for agriculture. (Erinç, S. 1957).

Natural Vegetation of the Study Area

The areas outside the settlement areas in the study area are largely covered with steppe vegetation formed under semiarid climate conditions (Figure 3). In the region where forest cover covers very little space, pastures consisting of steppes and agricultural lands have a widespread surface area.

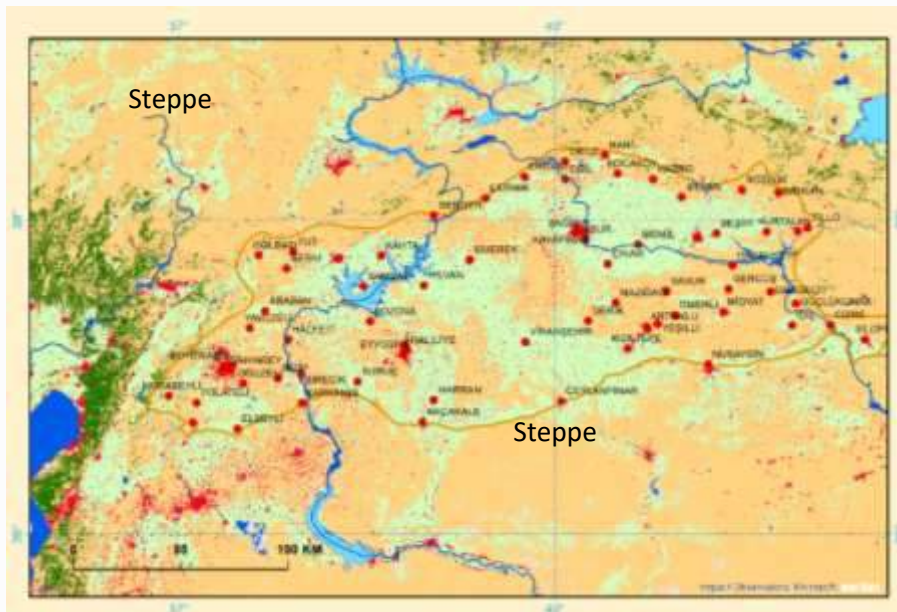


Figure 3: Land Use Characteristics in the Study Area

In Southeastern Anatolia, which is defined by the Taurus Mountains in the north and the Syria-Iraq dry region in the south, there are large steppe areas affected by climate and soil conditions. Steppe plants that bloom in the spring are exposed to extremely unfavorable climatic conditions due to the severe drought that continues from May to November. In this respect, it can be said that the region has a more pronounced steppe character compared to Central and Eastern Anatolia. Towards the Syrian border, in contrast to the high values recorded in temperature, annual precipitation decreases, and thus a desert-like steppe landscape prevails.

Relief and climate conditions also determine the lower limit of the natural forest in the region. These forests, which are seen on the edge of the steppe and generally consist of pure oak communities (*Quercetum*), have a xeric forest character since a continental climate type approaching the Mediterranean climate prevails in the region (Erinç, 1977).

Among the oak species, the gall oak is particularly notable. These oak communities can reach a very low level of 700 m in Siirt, Garzan and Silvan. Wild fruit trees are seen to be located at lower levels up to 600 m near the Tigris River. Accordingly, it is possible to accept the lower limit of the natural forest in the Siirt region as 700 m. This limit is slightly higher (800 m) in the

western part of the Diyarbakır basin and the outer skirts of the Mardin threshold. In the west, the lower limit of the natural forest maintains an altitude of 800 m on the outer edge of the Taurus Mountains, but as we go south, this level decreases to 600 m in Nizip. The same level decrease increases even more from Kilis towards the Mediterranean and decreases to 200 m around Antakya (LOUIS,).

This feature of the natural forest bottom limit indicates the existence of an agreement between the mobile minimums affecting the region. A branch coming from the Gulf of Iskenderun to the Euphrates is divided into two, one in the NE and the other in the SE direction, and the distribution of forest and steppe also develops in accordance with the same natural situation. According to him, the region is completely within the natural forest borders and there are only a few large steppe islands within this area. (Yaltrık, 1984).

The Southeastern Anatolian steppe area forms the northern end of the fertile crescent (*eroissant fertile*) starting from the Persian Gulf and extending to the foothills of the Taurus Mountains, drawing the Taurus arc and reaching Israel via the Amanos Mountains and Lebanon. The part of the steppe area between Karacadağ, Mardin threshold and the Taurus Mountains corresponds to the Diyarbakır basin.



The large part of the steppe outside this basin extends from the vicinity of Kilis to the vicinity of Cizre for a distance of 500 km. In the central part where Urfa is located in the middle, the width of the steppe is about 120 km. The Mardin-Viranehir-Urfa line, which is located to the south of this plateau area where wide plains and low and flat hills follow each other, constitutes the most barren part of the steppe area. The landscape of this desert-like steppe can only be changed by green areas created by abundant and regularly flowing karstic sources, such as in Nusaybin and Ceylanpinar along the Syrian border. In Southeastern Anatolia, the remnants of the Mediterranean flora have taken refuge in valleys where the microclimate is suitable and have survived until today as individual islands in the middle of the steppe. Mediterranean fruit trees such as *Pistacia vera*, *Olea europea*, *Ficus carica*, *Punica granatum*, and *Zyphus vulgaris* can be an example of this. The Mediterranean vegetation islands in the region testify to the fact that in the past, Mediterranean vegetation had a wider spreading area in Anatolia that extended to these areas. It should be accepted that major changes have also occurred in the vegetation in parallel with the development of the land and climate. It is possible to attribute the expansion of the steppe against the Mediterranean vegetation to this development.

The steppe plants in the region do not have a flora as rich as the Central and Eastern Anatolian steppes. The reason for this should be sought in the longer drought period compared to the mentioned steppe regions. As we mentioned in the climate section, the dry period in the region is very long (6 or 7 months) and this situation creates disadvantages for plant life.

The steppe plants that bloom with the spring rains turn yellow and dry due to the severe drought that continues from May to November, and the geographical appearance quickly takes on the character of a poor steppe. Among the steppe plants, the ones that are most resistant to drought are the bulbous, rhizome and tuberous plants and the plants with deep roots or hairy leaves. Among these perennial xerophytic plants, camel thorns and mulleins are noteworthy. (Erinç, 1977).

Plants Used in Meals in the Study Area

There are many plants that grow in nature and are traditionally used as food sources in human nutrition. Purslane is a good example in this respect. Today, purslane produced from culture as a vegetable in the market conditions has an important place. Similarly, the acanthus plant is collected from nature and traded directly.

The distribution areas of acanthus, sumac, licorice and thyme plants in the region are gradually shrinking due to new land openings. Plants collected from nature and consumed directly are generally collected from stony, mountainous regions and from places far from settlements. Heavy metal (Cd, Cu, Pb etc.) contents are lower in plants such as acanthus, whose roots are collected from these plants.

Similarly, plants such as terebinth, sumac and nuts can also be evaluated as organic products. Some plants are collected from nature and consumed in traditional eating habits. The increasing interest in these plants, the lack of sustainable production and excessive consumption cause the extinction of many species in nature, especially bulbous species.

The Southeastern Anatolia Region has semi-arid climate characteristics. However, many plants grow in the region's flora. The number of scientific studies on these plants in terms of ethnobotany is quite insufficient. With this study, it was determined that there are 65 taxa of plants from 27 families in the Southeast and its surroundings.

In addition to their use as vegetables, these plants also have therapeutic uses. The plants determined to be collected from nature and consumed in the Southeast are listed below in alphabetical order according to their families.

Amaranthaceae

Amaranthus reflowlexus (Photo 1): Young leaves are consumed as a vegetable like spinach. It is sold in Diyarbakır markets under the name "koksor". It grows around Diyarbakır.



Photo 1: *Amaranthus reflowlexus*

Anacardiaceae

Pistacia vera L. (Pistachio) (Photo 2). It is widely cultivated in the provinces of Mardin, Diyarbakır, Şanlıurfa and Siirt in the Southeastern Anatolia Region.



Photo 2: *Pistacia vera* L.

Pistacia khinjuk Stocks: *Bıtım* is a natural tree species known as "bıtım". Its fruits are consumed like pistachios. It is also used in soap making. Again, *P. eurycarpa* Yalt., which grows wild in the



region, is used in the same way. It grows widely in the provinces of Mardin, Diyarbakır, Siirt and Adıyaman in the region.

P. terebinthus L.: This species is known as “menengiç”, “kızban”. Its fruits are eaten raw or roasted. It is also an important commercial product consumed due to its aromatic coffee. It grows in the region around Diyarbakır, Adıyaman, Gaziantep and Siirt. It has a diuretic and expectorant effect medically (Zeybek and Zeybek, 1994).

Rhus coriaria L.: Sumac is a shrubby plant and its ripe fruits are used in meals in the region due to their taste and color. In the past, the leaves of the plant were used in leatherworking and fabric dyeing. It grows widely in the Southeastern Anatolia Region around Mardin, Diyarbakır and Siirt.

Apiaceae (Umbelliferae)

Eryngium campestre L. (Photo 3): It is a perennial herbaceous and thorny plant. Its young shoots are collected in the spring and used as a vegetable. Donkey thorn. Some *Eryngium* species are also used for this purpose. It grows widely in Mardin, Diyarbakır, Siirt and Adıyaman provinces.

Ferula orientalis: It is a perennial herbaceous plant. The young shoots of the plant are collected and pickled. It is sold as fresh and prepared pickles in the markets in the region. Çakşır. Some *Ferula* and *Prangos* species are used in the same ways or. It grows widely in Diyarbakır, Şanlıurfa and Adıyaman provinces.

Echinophora tenuifolia L. subsp. *sibthorpiana* (Guss.) Tutin: Cheesewort. The young leaves of this subspecies are collected in the spring. It is used especially in the production of herby cheese specific to the Diyarbakır region. It grows widely around Diyarbakır.



Photo 3: *Eryngium campestre* L.

Apium nodiflorum (L.) Lag. Bendik: It is a perennial herbaceous plant. Young leaves are eaten as salad. It grows naturally around Diyarbakır and Şanlıurfa.

Foeniculum vulgare: Fennel. The plant is 1-2 m tall, has yellow flowers, and is a perennial herbaceous plant with threadlike leaves. It is commonly found on the edges of gardens in the region. Its seeds are dark brown, have a spicy scent and a slightly burning taste. The seeds contain fixed and volatile oils. It generally has stomachic, carminative and milk-increasing effects.

The young shoots and leaves of the plant are consumed as fresh vegetables.

Araceae

Arum dioscoridis Sm. *Dioscoridis* (Photo 4): *Arum* species are usually 30-50 cm tall and are perennial plants. The leaves are arrow-shaped, long-stalked and dark green. Fresh leaves are harmful to humans and animals. The leaves contain starch, saponin and alkaloids. For this reason, the leaves are boiled and the boiling water is thrown away and used in the preparation of various dishes. It grows around Diyarbakır and Şanlıurfa.



Photo 4: *Arum dioscoridis* Sm.

Biarum carduchorum (Schoott) Engler; Fresh leaves are poisonous. The leaves are consumed as a vegetable after being boiled and dried. It grows around Diyarbakır and Şanlıurfa.

Asteraceae (Compositae)

Gundelia tournefortii L. (Photo 5): Kenger. The plant's young shoots are taken out of the soil and eaten as a vegetable, as well as regional dishes. Various dishes are made from boiled shoots. In the region, gum is made from the milk obtained by cutting the plant roots. These gums are chewed to strengthen the gums and increase appetite. It is widely sold in markets in the region during the spring months. It grows widely around Diyarbakır, Mardin, Şanlıurfa, Siirt and Adıyaman. In the region, gum is made from the milk obtained by cutting the plant roots.



Photo 5: *Gundelia tournefortii* L.

Tragopogon longirostris Bisch. Ex Schultz Bip.: Young leaves are used as a vegetable. It grows around Diyarbakır.

Boraginaceae

Anchusa azurea Miller (Photo 6): Young leaves are collected in early spring. The plant sold as “guruz” in regional markets is used as a vegetable. It grows widely around Diyarbakır and Şanlıurfa.



Photo 6: Anchusa azurea Miller

Brassicaceae (Cruciferae)

Eruca sativa Miller (Photo 7): Arugula. It is a one or two-year herbaceous plant. It is grown as a vegetable. It is eaten as a salad or fresh. The plant contains volatile oil and high amounts of vitamin C. Its leaves are used as a stimulant, tonic and cough suppressant. It grows naturally in the region around Diyarbakır and Şanlıurfa.



Photo 7: Eruca sativa Miller

Sinapis arvensis L.: Mustard. It is a herbaceous, yellow-flowered annual plant. Its leaves are used as salad or vegetable in the young stage. Its seeds are black and brown in color, and give a unique smell when crushed. It contains fixed oil and glycoside (sinigrin) in its composition. It is used as an appetite stimulant among the public. It grows widely around Diyarbakır and Şanlıurfa.

Lepidium sativum L. subsp. *spinescens* (DC.) Thell.: Cress, “Rışvat”. Its leaves are eaten as salad. It is usually collected and consumed in stony areas in the region. It grows naturally around Diyarbakır and Şanlıurfa.

Nasturtium officinale R. Br.: Watercress, “Tuzik”. They are herbaceous plants with white flowers that grow in water or near water. Its leaves are eaten as salad. It grows widely around Diyarbakır and Şanlıurfa. It is known as Tuzik. It is a plant consumed locally and specific to the region.

Capparaceae

Capparis ovata Desf. (Photo 8): It is known as “Kember”, “Kebere” or caper in the region. The pickle made from the flower buds is valuable. Although it has no significant local

consumption, it has recently been collected from the region and traded by merchants. It grows widely in the provinces of Mardin, Diyarbakır, Siirt, Adıyaman, Şanlıurfa and Gaziantep in the Southeastern Anatolia Region.



Photo 8: Capparis ovata Desf.

Caryophyllaceae

Gypsophyla bicolor (Photo 9): Soapwort. The plant is used in making halva and ice cream. After the roots of the plant are thoroughly boiled in water, dresses made of silk and valuable fabrics are soaked in this water and kept for a few hours to clean the fabrics without damaging their color and shine.



Photo 9: Gypsophila Bicolor

Fabaceae (Leguminosae) *Glycyrrhiza glabra* L.: Licorice. Licorice is obtained from the roots of the plant. The juice obtained from the extraction of the roots of the plant with water is consumed in the region as “licorice sherbet”. It is widely believed among the public that this sherbet is good for passing kidney stones. In addition, due to the special aroma of the plant, it is included in the composition of cola-type drinks. It is also consumed as hot tea. It is a plant that grows widely in the provinces of Diyarbakır, Mardin, Şanlıurfa and Siirt.

Trigonella foenum-graecum L.: Fenugreek. This species, which spreads naturally in the region, is consumed by obtaining it from herbalists.

Fagaceae

Quercus brantii Lindl (Photo 10): Oak. Its sweet and large acorns are cooked and eaten. It is a forest tree that grows widely in the



provinces of Mardin, Diyarbakır, Siirt, Adıyaman, Şanlıurfa and Gaziantep in the Southeastern Anatolia Region.



Photo 10: Quercus brantii Lindl

Quercus infectoria Olivieri subsp. Boissieri: Gall oak. Its acorns are cooked and eaten. It is a forest tree that grows widely in the provinces of Mardin, Diyarbakır, Siirt, Adıyaman, Şanlıurfa and Gaziantep in the Southeastern Anatolia Region.

Iridaceae

Crocus ssp. (Photo 11): There are species of crocus species that bloom in autumn and spring. The “Deyrulzahferan” Syriac church in Mardin takes its name from this plant and it is known that high-quality saffron was produced in the Viranşehir district of Şanlıurfa in the 17th century (Baytop, 1984). The *Crocus pallasii* species is called “pivok” and its bulbs are consumed by eating.



Photo 11: Crocus ssp

Lamiaceae

Teucrium polium L. (Photo 12): Known as “Mary Hort”. It is a steppe plant that blooms in spring. Its leaves and flowers are brewed and drunk as tea to relieve stomach pains. It is a blood sugar reducer. It grows widely in the Southeastern Anatolia Region in the provinces of Mardin, Diyarbakır, Şanlıurfa, Siirt and Adıyaman.



Photo 12: Teucrium polium L.

Sideritis libanotica Labill.: Mountain tea. Perennial herbaceous plants. Leafy and flowering branches are used as tea. It grows widely around Siirt and Adıyaman.

Cyclotrichum niveum (Boiss.) Manden. Et Sheng.: An endemic species and its tea is used especially against influenza infections in the region. It is an endemic plant growing around Adıyaman.

Ocimum basilicum L.: Basil. It is used as a fresh or dried spice in salads and dishes. It is cultivated around Mardin, Diyarbakır, Şanlıurfa and Siirt. It is an annual herbaceous plant with white or pink flowers, 10-40 cm high. The plant contains volatile oil, and this oil contains astragalol, eugenol and cineol components. It is mostly used as a spice among the public and is sold in bunches in the markets. It also has a sedative, stomachic, diuretic and carminative effect. The *O. minimum* species, another species belonging to the *Ocimum* genus, is grown in pots for ornamental purposes.

Mentha longifolium L.: The fresh leaves of the plant that grows near water are used in salads and dishes like mint. It is also drunk as tea. It grows naturally in the provinces of Diyarbakır and Şanlıurfa in the region. It is known as Yarpuz or punk.

Satureja hortensis L.: It is called mountain thyme and is known as annual thyme. It is added to the dish made as Hedik.

Thymbra spicata L.: It is called Zahter, “zature” and “cahtiri” and is the most consumed thyme species in the region. It grows widely in the provinces of Mardin, Diyarbakır, Adıyaman and Gaziantep in the Southeastern Anatolia Region. It is widely sold in herbalists. In addition, the following species are also used as thyme.

Thymbra sintonensis Bornm. & Aznav.: It grows around Diyarbakır and Siirt. *Origanum vulgare* L.: Grows in Diyarbakır, Siirt and Adıyaman provinces. *Thymus kotschyanus* Boiss. & Hohen: Grows around Diyarbakır, Şanlıurfa and Adıyaman.



Liliaceae

Allium nemrutdaghense (Photo 13): Its leaves are consumed fresh. It is a wild onion species endemic to Adıyaman Nemrut Mountain. *Allium scorodoprasum* L.: Known as “Sir” or “sirim” in the region. Its leaves are eaten fresh. It is a wild onion species grown around Diyarbakır.



Photo 13: *Allium nemrutdaghense*

Colchicum falcifolium Stapf.: Crocus. It is a white or pale pink flowered crocus species that blooms in early spring. The tubers of this species are peeled and eaten fresh. It is a poisonous plant, causing poisoning. It grows widely in the provinces of Mardin, Diyarbakır, Şanlıurfa and Adıyaman in the Southeastern Anatolia Region.

Eremurus spectabilis Bieb.: Çiriş otu. It is a herbaceous plant with yellowish flowers that is approximately 1 m long. Its young leaves are used as a vegetable. It is known as “gülük” in the region and is widely used in markets. It grows around Diyarbakır.

Ornithogalum narbonense L.: It is a perennial bulbous and white flowered herbaceous plant species. Its young leaves are sold in regional markets. It is known as “akbandır” or akbaldır in the region and is used as a vegetable. Other *Ornithogalum* species grown in the region are also used for the same purpose. It grows widely in Diyarbakır and Şanlıurfa in the region.

Linaceae

Linum usitatissimum (Photo 14): Flax. The plant is called “bızırkıtan” in the region. Its seeds are consumed by roasting. Linseed oil is obtained from its seeds.



Photo 14: *Linum usitatissimum*

Malvaceae

Malva neglecta Wallr. (Photo 15): Mallow is known as “tolik”. It is a plant whose leaves are used as a vegetable and sold in regional markets. It is a plant that grows widely in the Diyarbakır and Şanlıurfa areas.



Photo 15: *Malva neglecta* Wallr

Orchidaceae

Cephalanthera kotschyana (Photo 16): Its tubers are used in making salep. It grows around Diyarbakır, Siirt and Gaziantep.



Photo 16: *Cephalanthera kotschyana* Renz

Cephalanthera kurdica Bornm. Ex Kranzlin: Its tubers are used in making salep. It grows in Diyarbakır, Mardin, Adıyaman and Siirt provinces.

Ophrys mammosa Desf.: Its tubers are used in making salep. It grows around Diyarbakır, Mardin and Siirt. *Orchis laxiflora* Lam.: Its tubers are used in making salep. It grows widely in Diyarbakır and Şanlıurfa provinces. Although the tubers of many orchid species are used as salep, the species mentioned are the orchid species commonly collected in the region.

Polygonaceae

Rheum ribes L. (Photo 17): Işkın. It is a perennial, large-leaved plant that grows in mountainous areas. The plant's leaf stalks and the stem of the inflorescence are eaten fresh after peeling. It carries tannin and small amounts of anthracene derivatives as



active ingredients. The plant grows widely around Diyarbakır, Gaziantep, Adiyaman and Siirt.



Photo 17: Rheum ribes L.

Rumex acetosella L.: Sorrel. It is a perennial herbaceous plant. Its young leaves are eaten raw. It grows around Diyarbakır. It is known as “Tırşo” in the region.

Portulacaceae

Portulaca oleraceae L. (Photo 18): It is usually found as a weed in vegetable gardens and cotton fields. The leaves of the plant are consumed as a vegetable. In addition, “pırpar” dishes specific to the region are made, and its fresh leaves are widely consumed as cacık (cold drink made with green grass and yogurt).



Photo 18: Portulaca oleraceae L.

Ranunculaceae

Nigella sativa L (Photo 19): The black cumin plant is an annual plant that grows 40-50 cm tall, has threadlike leaves, white flowers and forms capsules. Although it is used as a spice in baked goods, it has a diuretic and milk-increasing, appetite-stimulating and menstrual-inducing effect. It grows around Diyarbakır.



Photo 19: Nigella sativa L.

Rosaceae

Cerasus microcarpa (C.A.Meyer) Boiss. subsp. *tortuosa* (Photo 20) Browicz: It is a naturally growing, bush-like and small-fruited cherry species. Its fruits are eaten by local people. It grows widely in the provinces of Mardin, Diyarbakır, Şanlıurfa, Siirt and Adiyaman in the Southeastern Anatolia Region.



Photo 20: Cerasus macrocarpa

Cerasus mahaleb L.: Miller is a type of tree-like wild cherry. Its fruits are bitter and used medicinally. Its seeds are added to muffins due to their taste. It grows widely in the provinces of Mardin, Diyarbakır and Adiyaman in the Southeastern Anatolia Region.

Crataegus aronia (L.) They are small tree-like or semi-shrub plants. Their fruits are sold in local markets. In addition, the fruits of *C. orientalis* Pallas ex Bieb. var. *Orientalis* are used for the same purpose. *Crataegus monogyna* Jacq. subsp. *monogyna*, which grows in the region and is typical with its red, single-seeded fruits, has medicinal properties. It grows widely in the provinces of Mardin, Diyarbakır, Şanlıurfa, Siirt and Adiyaman in the Southeastern Anatolia Region.

Pyrus syriaca Boiss. var. *syriaca*: Wild pear grows wild in nature. Its ripe fruits are eaten by local people. It grows in the provinces of Diyarbakır, Şanlıurfa, Siirt and Adiyaman in the region.



Rosa canina L.: Rosehip is known as “surguler”. It is a bush-like plant. Its fruits are used by the local people in making jam and as tea. It grows widely in the provinces of Mardin, Diyarbakır, Şanlıurfa, Siirt and Adıyaman in the Southeastern Anatolia Region.

Rubus sanctus Schreber: Blackberry is known as “dırık”. This plant is a natural plant that usually grows in the form of a bush near water. Its fruits are eaten by people. Another type of blackberry grown in our region, *R. discolor*, is used in the same way. It grows widely in the provinces of Mardin, Diyarbakır, Şanlıurfa, Siirt and Adıyaman in the region.

Malus sylvestris Miller: Wild apple. It is a woody natural apple species that grows in the mountainous areas of the region. Its fruits are eaten by the local people. It grows around Diyarbakır.

Ulmaceae

Celtis glabrata Steven ex Planchon and *Celtis tournefortii* Lam. (Photo 21): Çitlenbik. They are large woody plants. They are known as “dağdağan” or “teyer” in the region. The orange or brown fruits of both species are edible. They grow widely in the provinces of Diyarbakır, Şanlıurfa, Siirt and Gaziantep in the Southeastern Anatolia Region.



Photo 21: *Celtis glabrata* Steven

Urticaceae

Urtica pilulifera L. (Photo 22): Nettle is known as “adırvaş”. It is an annual herbaceous plant and is sold in markets. Its young leafy branches are eaten. The plant has a stopping effect on stomach and intestinal bleeding. It is also used as herbal tea against diabetes and cancer. It grows around Diyarbakır. (Kızıl, 2004).



Photo 22: *Urtica pilulifera* L.

RESULT

Climate change can affect the Southeastern Anatolia Region in various ways. The increase in temperatures in the region can negatively affect agricultural and livestock activities. High temperatures increase the water requirement of plants and increase the risk of drought. The decrease in precipitation due to climate change can cause depletion of water resources and decrease in agricultural production. This situation makes it difficult to grow water-dependent products in particular.

Decreased precipitation and increasing temperatures can cause the soil in the region to dry out and increase the risk of desertification. This reduces the productivity of agricultural lands. Climate change can affect the habitats of plant and animal species in the region and cause a decrease in biodiversity. This situation can disrupt the ecosystem balance. The negative impact on agriculture and livestock can threaten the economic activities and livelihoods in the region. This can increase migration movements and lead to social problems.

The widespread presence of endemic or relict species in the region has also caused the nutritional culture to differ or show similarities locally. Although the local plants collected from nature have been largely destroyed today, their examples can still be found in local markets and create local flavor differences. However, the study area is rapidly losing its biodiversity due to both its physical and human characteristics. In this respect, it is among the locations with the highest risk. This situation necessitates urgent actions to be taken, especially in this location that hosts endemic species.

If we talk about the place of edible wild herbs in culinary culture, we can say the following about the way herbs are consumed. These herbs can be classified as those consumed fresh, those roasted and made into meals, and those used in pita and pastries. There are 30 taxa in this category of those that can be consumed fresh. The flowers, seeds and above-ground parts of these plants are consumed. There are 20 taxa in this category of those roasted and made into meals. Examples of those consumed in the form of soup are pırpırım and kenger.

Although the Southeastern Anatolia Region has advantages in terms of landforms and fertile soil, it faces the problem of drought. However, with the GAP, irrigated farming activities are increasing in the region. The lands left fallow due to drought are being rehabilitated. Thus, even products that require water such as rice, corn and cotton can now be produced. In addition to these, red lentils, barley, wheat and millet are also traditionally produced. Products such as peanuts, olives, pomegranates, walnuts, watermelons, melons, chickpeas, sesame and onions are also widely produced. With their increasing effects, climate change will increase drought in the region and cause deforestation. This will narrow the living space of the plants I mentioned and may cause them to disappear over time. Various strategies and adaptation mechanisms should be implemented for



plants to survive in the face of drought risk. In order to cope with these effects, measures such as water management, growing drought-resistant plant species and adopting sustainable agricultural practices can be taken. Seed depots should be created to prevent these and the existence of these plants should be maintained.

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STRUGGLES AND COPING MECHANISMS OF NON-SPED MAJOR DETAILED TEACHERS: BASIS FOR TEACHER ENHANCEMENT PROGRAM

Aimee V. Aragon, PhD¹, Bridgette P. Gregorio², Rowell A. Loyao³

¹Teacher 3

²Teacher 2

³Project Development Officer 1

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ABSTRACT

This research was undertaken to shed light on struggles and coping mechanisms of non-SPED major detailed teachers. A total of 11 informants as total enumeration of the school's population were selected in a study as basis for crafting a teacher enhancement program. It utilized a descriptive qualitative design through face to face in-depth interviews of the two full SPED teachers, observations for 4 weeks and a focus group discussion to all the nine receiving teachers. This specific method explicate the emic teachers' coping mechanisms that arise in the normalcy of everyday life. Findings revealed that the learning environment, socio-economic status, instructional practices, assessment & diagnosis and parental engagement were the identified struggles of these teachers while the appropriateness of strategies and their passion are the attributed coping mechanisms.

KEYWORDS: *Struggles of non-SPED teachers, Coping Mechanisms of non-SPED teachers, Inclusive Education, Program Development for Special Education*

I. CONTEXT AND RATIONALE

The drive of the Philippine Department of Education for Inclusive Education (IE) presents challenges along with the evolution of the special needs of the learners. In terms of their physical, social, mental, and emotional development, people with special needs differ from their counterparts who have typical development in terms of requirements and traits. For a variety of reasons, people with special needs may deviate markedly from the level expected for their age in terms of personal traits and academic proficiency (Baglama, Serttas and Demirok, 2017).

In part, special education programs in the Philippines started more than a century ago (Camara, 2015). Throughout the years, many models of special education programs have been implemented in the country. Some of these are: special education center, special day school, resource room plan and others. These happened because of progressive development in the Philippine Education System through initiation of reforms such as the Governance of Basic Education Act 2001, Philippine Plan of Action for Asian and Pacific Decade of Disabled Persons 2003-2012 and Philippine Education for All 2015 National Action Plan, to name a few. These reforms resulted in the Department of Education issuing Department Orders, which led to the enhancement of education centers, provision of an early education program, and teachers' education and training.

Furthermore, curriculum, community and parental involvement, early childhood care and education, and others

(DepEd, 2004). These areas defined the main project of the Education Sector-Inclusive Education (IE) project (DepEd, 2009). With the advent of all of those reforms, studies to review existing services are necessary for evaluation. In Philippine Law in the Magna Carta for Persons With Disabilities (1992) and in international law in the UN Convention on the Rights of Persons With Disabilities which was ratified in the Philippines in 2008, all children including those with disabilities have a right to education.

On the other hand, in the labor market, skill mismatch is a difficult problem that affects individuals, businesses and communities (Bilan et al. 2020); it is still becoming more significant in light of the current and emerging megatrends such globalization, demographic shift, and technological innovation (Pauceanu et al. 2020).

Moreover, recent technical breakthroughs have brought about significant changes in several domains within the modern world. One of these industries that has been significantly impacted by these advancements is education. Since every student is different and has a wide range of learning styles and capacities, the predominant trend in modern education is to move away from teacher-centered traditional approaches and toward a student-centered approach to teaching (Ozbal & Eski, 2019). One of the fundamental goals of democratic societies is the provision of equal educational opportunities, and it is precisely impossible to do so for students with special needs without special education services (Agha and ELDAou, 2018).



Albeit to this, in order to include people with special needs in regular learning environments, mainstreaming and inclusion practices have increased. This allows them to spend time and receive education with their peers, feel like a part of the community, and ultimately improve their self-confidence and daily living skills (Dogan and Bengisoy, 2017). Today, every individual with special needs has the right to receive education on par with their peers.

In Sarangani Division, San Felipe Central Elementary School had already implemented the program entitled “Child Find” wherein the non-SPED detailed teachers made a home visitation for the profiling of the learners. It thoroughly made a mark that it is the only school in the Municipality of Maasim that caters the needs of the pupils with disabilities. Implementing inclusive education has been in practice since 2003 in spite of the absence of proper recognition of the efforts of the school and its unaccomplished documentation to formally incorporate in its name the appellation as a special education center. Moreover, detailed teachers are not Sped-major graduates. Instead, they only attended trainings to address issues and concerns in handling these pupils, particularly on the Visual Impairment Training which was spearheaded by the Resources for the Blind Inc. (RBI). This study, then, found out the struggles and coping mechanisms of the detailed non-sped teachers, which eventually led the proponents to craft a teacher enhancement program to address this issue. The objective of inclusive education is noble, yet, the drawbacks are common especially on teachers who have not been trained for the specific disabilities on the learners. This has continually posed a challenge, not just in the locality of San Felipe Central Elementary School but also in the other public schools implementing inclusive education

II. ACTION RESEARCH QUESTIONS

This study was conducted to determine the struggles and coping mechanisms of non-SPED detailed teachers in San Felipe Central Elementary School, Maasim 1 District, Maasim Sarangani Province during the School Year 2023-2024.

Specifically, it sought to answer the following questions:

1. What are the struggles of non-SPED detailed teachers?
2. What are the coping mechanisms of non-SPED detailed teachers?
3. Based on the findings, what enhancement program could be crafted?

III. INNOVATION, INTERVENTION, AND STRATEGY

This study aimed to identify the struggles and coping mechanisms of the detailed non-sped teachers. In-depth interviews were conducted and scheduled according to the availability of the three key informants. They were teaching learners with disabilities (i.e. learners with deaf and mute, down syndrome, autism, cerebral palsy, intellectual disability and Attention-Deficit/Hyperactivity Disorder (ADHD)) in the special education program in San Felipe Central Elementary School. Since the inception of this study, series of clarificatory

interviews were done in order to verify the responses of the informants.

This is a four-week action research which started on January 8, 2024. The informants were purposively chosen because they were the ones teaching with learners with disabilities. The informants included were two Master Teachers and the remaining nine informants were receiving teachers of the students who were mainstreamed to be included in a regular class with a total of 11 informants. The proponents and the key informants met twice a week, every Monday and Wednesday, to conduct interviews; observations on their respective classes were also done once a week, every Thursday. To complete the triangulation process, a focus group discussion was also done to the other nine non-sped major teachers who neither have formal trainings nor seminars on special education.

During the first week, the first interview session was conducted with the key informants. The questions revolved on the understanding of the term developmental disability and what were the learners’ disabilities present inside the classroom.

On the second week, the proponents asked on the learning strategies and they employed in dealing with these types of learners.

Moreover on the third week, the key informants were asked about the challenges that they have experienced.

On the fourth which served as the final week, they were asked about their coping mechanisms based from the challenges that they have experienced.

Finally, from the data collection, a program was developed to address this issue on the struggles and coping mechanisms of non-SPED detailed teachers in San Felipe Central Elementary School. The program plan include the following parts:

Findings – this contains the thematic results of the interview being conducted.

Activities – this part lists down the activities in response to the findings.

Time Frame – denotes the period or time allocation for each activity.

Specific Objectives – these are the specific objectives from the activities identified.

Expected Outcome – the expected outcome of the activity.

Proposed Budget – this entails the budget requirement for the conduct of the study.

Source of Fund – the fund shall be taken from the school’s MOOE and other external sources

Person Involved - the focal persons in-charge of the activity

IV. ACTION RESEARCH METHODOLOGY

This action research identified the various struggles and coping mechanisms of the 11 non-sped major detailed teachers in San Felipe Central Elementary School, Maasim 1 District, Division of Sarangani.



a. Research Method

This action research utilized purely qualitative research design. Data collection was done through in-depth interviews, series of class observations and triangulation to further validate the gathered data. The data was subjected to thematic analysis in order to identify patterns and meanings.

b. Participants and/or Other Sources of Data and Information

The respondents of this study were 11 non-sped detailed teachers of San Felipe Central Elementary School,

Maasim 1 District, Colon Maasim Sarangani Province. Total enumeration was utilized in choosing the respondents since they are only few in school and met the criteria as the subject of this study. Based on their profile, 10 of them were female and only one of them is male, mostly married (n=10) and with an average age of 38 years old (max=56 and min=25). Two of them were full SPED teachers and nine were receiving teachers. Additionally, all of them had finished a bachelor's degree in Elementary Education, three had Master's Degrees in Educational Management and three had their on-going Master's Degrees in School Administration.

Table 1

Distribution of Participants of the Study

Non-Sped Detailed Teachers	Length of Service in Teaching SPED
Teacher A	11 years
Teacher B	10 years
Teacher C	11 years
Teacher D	8 years
Teacher E	8 years
Teacher F	7 years
Teacher G	7 years
Teacher H	7 years
Teacher I	8 years
Teacher J	8 years
Teacher K	6 years

c. Data Gathering Method

This study utilized a descriptive qualitative design through face to face in-depth interviews, observations and a focus group discussion. The informants included were two Master Teachers and the remaining nine informants were receiving teachers of the students who were mainstreamed to be included in a regular class. The proponents and the key informants met twice a week, every Monday and Wednesday, to conduct interviews; observations on their respective classes were also done once a week, every Thursday. To complete the triangulation process, a focus group discussion was also done to the other nine non-sped major teachers who neither have formal trainings nor seminars on special education.

A semi-structured interview guide was used to gather data from the key informants and they were identified through total enumeration. Only 11 providers qualified in the criteria inclusions, i.e. a teacher who is in the school for at least one

year to provide a direct service to children with special needs. Each informant was interviewed from 30 minutes to one hour. This method was used to understand more deeply the structure and flow of the service delivery based on the perspective of the providers for further improvement of the service (USAID, 1996). The interview guide has four areas: profiling of teachers, students and services; defining responsibilities of teacher, parents and community; challenges in teaching and instruction, assessment and parents' involvement; and teachers' recommendations.

d. Data Analysis Techniques

This research utilized descriptive technique for data analysis. This process in qualitative data analysis approach was suited as it processed the systematizing descriptive data collected through interviews, focus groups, surveys, and observations and then interpretations all throughout the study.

V. DISCUSSION OF RESULTS

Research Question No. 1: What are the struggles of non-SPED detailed teachers?

Table 2

Themes and Thematic Statements on the struggles of non-SPED major detailed teachers

ESSENTIAL THEMES	THEMATIC STATEMENTS
Physical Condition of the Learning Space	The learning environment features small classroom size wherein students cannot maximize to move considering that they have different disabilities.
	Voices and noises can be heard from the next class because of moveable
	Lack of proper ventilation (ie. Electric fans or air conditioner units)
	Long distance of school from learner's home considering the fact that San Felipe Central Elementary School is the only school in the Municipality of Maasim that offers special education classes
	Lack of equipment/materials to support the needs of the learners



Socio-Economic Conditions of the Family	Attitude of other learners towards learners with disabilities
	Learners with disabilities are being bullied by their classmates
	Behavioral problems of the learners with disabilities such as their temper and tantrums
	Problems on their social skills because they are not easy to get-along with
Teaching and Instruction Practices	Insufficient financial capacity of their parents to send their child into a recognized SPED center
	Teachers handling these learners are non-SPED major graduates
	Lack of trainings/seminars regarding special education
	Unavailability of teaching and curriculum guides
	Insufficiency of learning materials such as manipulatives and activity sheets
Assessment & Diagnosis	Lack of instructional materials that can developed their lifelong learning skills (ie. Sewing machine, proper hygiene resources, gardening tools)
	Lack of parent's budget to assess their children for proper clinical diagnosis
	Lack of teachers' training in assessing children with special needs
	Inadequate materials for screening and assessing children with special needs
Parental Involvement	Parents have negative attitudes about allowing their children to be assessed. They were apprehensive about the result of the diagnosis of their child
	Lack of support towards their child with disabilities
	Parent's negative attitude towards the educational experience of their child
	Lack of follow-up at home
	Injecting discipline at home

Based from the interview that the researchers conducted, non-SPED major detailed teachers provided their insights into the challenges they had experienced, and these were clustered into five essential themes: Physical Condition of the Learning Space, Socio-Economic Conditions of the Family, Teaching and Instruction Practices, Assessment and Diagnosis and Parental Involvement.

In physical condition, thematic statements fall into the classroom size, the lack proper ventilation, the long distance of the school from their home and the lack of equipment/materials were identified.

"Gamay ang among room ug medyo init kay duha lang ka ceiling fan ang naa, kaya dili maka concentrate among mga estudyante," a direct statement stated by Teacher Lanie (not her real name).

"Medyo saba ang among katapad na room kay mga Grade 1 pupils, usahay dili kaau sila maka concentrate sa among mga lesson," another statement affirmed by Teacher Ana.

Aside from these statements, they also expressed their sentiments to the researchers on their concerns regarding the insufficient learning materials inside the classroom.

"We thoroughly lack the needed learning materials for our learners that is why it became one of our problems inside the classroom". That was the exact statement given by Teacher Elsa (not her real name).

In addition, non-SPED detailed teachers also noticed the absences incurred by their learners due to the location of the school from their home.

"Maglisud sila (the parents) ug pa eskwela sa ilang mga anak kay kalas na sa pamasaha ug uban pang mga kailangan sa eskwelahan". Teacher Faye expressed during the interview. This was coherent with the findings of Camara (2015) that most special education centers are located in urban areas. Children living far from schools or urban areas, experience difficulties in accessing educational centers.

On the other hand, in socio-economic status as a theme, the results agree that children in an inclusive classroom setting experienced bullying from classmates. This was coherent with the results of a study in Hong Kong which found that children with developmental problems usually experienced problems with peers (Wong, 2022).

Moreover, the third theme encompasses the teaching and instruction. This theme offers a wide arrays of the actual situation present inside the classroom as the teacher and the learners explores the teaching and learning process.

"From the preparation of the lessons to be taught, there is an unavailability of the learning resources and materials to be used. It is truly a hard time for us." Teacher Nikki expresses her experiences to the researchers. It was also affirmed by Teacher Mylene and Teacher Martha during the focus group discussion.

In dealing with the assessment and diagnosis as the fourth theme, the teachers' answers pertained to the financial and economic status of the parents that they have.

"Sa akung pagpangutana sa mama sa akung estudyante, wala jud daw sila'y ika provide na pamasaha paingun sa Davao ug bayad sa mga Neurodevelopmental Pediatricians kay medyo mahal. Maayo pa ug ila nalang gamiton ang kwarta sa pang adlaw-adlaw nilang panggasto arun mabuhi." A heart-touching sentiment of Teacher Alice being shared to the group.

Finally, as the moral support of these learners must first come at home, parental involvement comes as the final theme of this action research.

"As we conducted the Child Find Program to scout and check the situation of our learners at home, the parents are hesitant to welcome us. They are in denial of accepting their child's learning and behavioural disability and contented being uneducated (ie. pertaining to their children)." An honest statement of Teacher Fiona (teacher's pseudonym).



All of the aforementioned statements were the information gathered all through-out the 4-week observation and interview session with the non-SPED detailed teachers.

Research Question No. 2: What are the coping mechanisms of non-SPED detailed teachers?

Table 3
Themes and Thematic Statements on coping mechanisms of non-SPED detailed teachers

ESSENTIAL THEMES	THEMATIC STATEMENTS
Teachers' Teaching Strategies	Application of teachers' knowledge from the trainings being attended
	Teachers varied teaching styles in dealing the learners with disabilities
	Teachers utilized different activity sheets to facilitate learning, such as tracing the lines and connecting the dots to form basic letters.
	One-on-one teaching approach
	One learner every hour method of teaching
	Teachers teaching life skills training in a way that students were trained in basic hygiene practices and communication skills.
Teachers' Attitudes	Teachers' elastic string of patience in handling the learners
	Dedication and commitment to teaching profession
	Teachers' passion for the profession
	Treating the learners as his/her own child
	Teachers' perseverance in handling their tantrums

Results of the conducted interview based from the coping mechanisms of non-SPED detailed teachers emerged two themes: these are all about teachers' teaching strategies and teachers' attitudes.

"I always strengthen my teaching styles in dealing with them because they further need my assistance in the class. Preparing worksheets through dotted lines and curves to form letters out of their name served as one of my learning activity sheet." Teacher Nelly stated.

"As a passionate teacher in this noble profession, I always see to it that I can provide the materials available through localization and contextualization of the lessons for them."

Unavailability of the learning materials is the common problem that we are facing, but with commitment and hardwork we can always make a way", Teacher Andrew stated.

Research Question No. 3: Based on the findings, what enhancement program could be crafted?

Given the facts presented from the study being conducted, the researchers came out in crafting a teachers' enhancement program in order to fill in the gaps of the non-spced detailed teachers in handling their learners with disabilities in the teaching and learning process.

Teachers' Enhancement Program

Action Plan

Program Plan of Activities							
Findings	Activities	Time Frame	Specific Objectives	Expected Outcome	Proposed Budget	Source of Fund	Person Involved
A. Struggles of Non-SPED Major Detailed Teachers							
Budget allocation for building construction	Construction of SPED Building	November 2019 – June 2020	To provide an ideal SPED classroom suited to the needs of our learners with disabilities	New SPED Building	Php 1,300,000.00	Stakeholders Partnership (Public & Private, Internal& External)	School Principal, SPED Teachers, Receiving Teachers, & Stakeholders
Support from the Local Government Unit (LGU) to the parents	Subsidy from the LGU to support food and training of the parents atop of the existing 4P's	November 2019 – June 2020	To have an additional assistance coming from the LGU	Additional assistance given to the parents	Php 1,000.00	Local Government Unit (LGU) subsidy	Parents of SPED Learners LGU
Teachers' training related to Special Education	Training Enhancement Program to Teachers handling pupils with disabilities	November 2019-June 2020	To train teachers to become more effective in handling pupils with disabilities	Teachers gained new insights and skills during training	Php 10,000.00	Stakeholders Partnership (Internal and external stakeholders)	School Principal, SPED Teachers, Receiving Teachers, & Stakeholders



Network to have access to Clinical Office	Invite sponsors to have access to clinical office	November 2019-June 2020	To strengthen network to have access to clinical office	Strengthened networking within internal and external stakeholders to further access to clinical office	Php 5,000.00	Stakeholders Partnership (Internal and external stakeholders)	Parents of SPED Learners, School Principal, SPED Teachers, Receiving Teachers, & Stakeholders
Parental Involvement of the SPED Parents	Conduct monthly meeting of the SPED Parents	November 2019-June 2020	To intensify the parental involvement of the SPED Parents	100% involvement of the SPED Parents toward the academic and extracurricular activities of their children.	Php 1,000.00	MOOE	Parents of the SPED Learners, School Principal, SPED Teachers, Receiving Teachers, & Stakeholders
B. Coping Mechanisms of Non-SPED Major Detailed Teachers							
Linkages for Partnership in provision of learning materials and other supplies needed	Link with internal and external stakeholders	November 2019-June 2020	To strengthen linkages for partnership	Strengthened linkages within internal and external stakeholders	Php 5,000.00	Stakeholders Partnership (Internal and external stakeholders)	Principal, SPED Teachers, Receiving Teachers, & Stakeholders



VI. REFLECTION

The findings of this study provides insights of special education programs for children with special needs. The results were particularly intended to improve the service provision of special education not just in San Felipe Central Elementary School but to extend its parameter to its neighboring schools as well. Program related recommendations included: network of linkages to further support the financial and. Assessment of the child's developmental condition should be available to determine what educational outcome was expected. Secondly, participation from the different stakeholders was necessary because it was noted as being one of the success factors in different educational programs in special education. Most importantly, parents should be considered as active partners in delivering special education, and their participation should be highly encouraged. Nevertheless, private sectors and non-government organizations should be consulted in planning for program development in order to mobilize resources, because investments in special education were globally limited and resource mobilization was highly encouraged. Additionally, methodological recommendation includes gaining insight from the parents and the school administrator as well. This will provide different perspectives through triangulation.

Furthermore, it is hereby recommended that further study can be conducted base from the effect of the mainstream learners into ordinary class. This will enrich the program recommendation involving SPED teachers and learners inside the classroom. A longitudinal method of this study can be done to further improve the strategies to be employed of any teachers handling learners with disabilities.

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THE EFFECT OF BOMBING ATTACKS ON THE WELLBEING OF EMPLOYEES IN WAJIR COUNTY IN KENYA

Ahmed Adan Abdikadir¹, Eunice Gacheri Thiankolu²

¹School of Business and Economics, Mt. Kenya University

²School of Business, Kenya Methodist University

ABSTRACT

Terrorist acts are taking place in many parts of the world and the bombing of government buildings, multinational companies, the kidnapping of passenger airplanes and ships; Diplomatic representations, airports, shopping centers, sometime the attack that attacks are conducted against the subway and train stations, government officials, the kidnapping of diplomats and businessmen, or in different ways, such as the assassination of these people and the confrontation of international community. In response to this wave of crime, the governments have put in place measures which include establishing the anti-terrorism police unit and increasing awareness of the public on the dangers of terrorism. Despite the effort, there are still major milestones to be made in the fight against terrorism. Therefore, the study sought to establish the effect of bombing attacks on employees' wellbeing in Wajir County. The main objective was to establish the effect of bombing attacks on employees' welfare. The study was guided by Rational Choice Theory. The target population for the study was top level management, middle level management and senior employees which consist of 200 employees in the Security Agencies. Stratified random sampling was used to sample individuals from the various groups; the study had a sample size of 60 respondents distributed equally among the three-government department. The study used primary data which was largely quantitative and descriptive in nature and a five-point questionnaire was the research instruments. Descriptive design and inferential analysis was used for data analysis. From the findings, there was a statistically significant relationship between bombing attacks and employees' wellbeing in Wajir County, Kenya ($P < 0.05$). Based on the findings, it was recommended that more stringent policies and measures should be directed into reducing the bombing attacks in Wajir County and Kenya at large. Future Research gaps were suggested and will act as a reference point to other researchers on similar topics.

KEY WORD: Bombing attacks, terrorism, employee wellbeing

INTRODUCTION

Background of the Study

Terrorism has recently emerged as a prominent social problem. Terrorist attacks produce detrimental effects that are not limited to an isolated geographic region. There are rival actors intending to both cause and prevent terrorist attacks (Knemeyer et al., 2009). Terrorist acts are taking place in many parts of the world and the bombing of government buildings, multinational companies, the kidnapping of passenger airplanes and ships; Diplomatic representations, airports, shopping centers, sometime the attack that attacks are conducted against the subway and train stations, government officials, the kidnapping of diplomats and businessmen, or in different ways, such as the assassination of these people and the confrontation of international community (Topal, 2004).

A growing literature has concluded that terrorism affects the economy, yet less is known about its impact on individual welfare. For instance, Clark, et al., (2020) studied on the impact of the 2013 Boston marathon bombing on well-being. The findings were that happiness declined sharply and negative emotions rose significantly. While the effects do not persist

beyond one week, they may entail adverse health and economic consequences. Furthermore, survivors are greatly impacted when terrorism strikes a place of employment, where individuals spend a large portion of their lives. Workplace violence can negatively impact an individual's life by disrupting their routines, sense of purpose, and access to social and economic resources. The workplace is fundamentally a social context. Individuals exposed to terror after the 2011 explosion in Oslo were more likely to have sadness, PTSD, and increased sick leave (Clark, et al., 2020). Globally terror cases from UN Security Council report indicates, Western world was hit by several major terrorist attacks. New York, London, and Madrid were hit hard by Al-Qaeda related terrorists. The most famous one is the 9/11 attack, on September 2001 a succession of four corresponding assaults was launched by Al-Qaida a terror group in the New York city and Washington DC, two (2) planes collided into the north and south tower of the NYC world trade centre which collapsed within and led to destruction of nearby buildings it caused the death of about 3000 people. , Yazidi communities bombing is a deadly car bomb assault and attack committed on August 2007 with corresponding suicide bombs exploded in the town of Yazidi and Jazeera with estimated casualties of 796 and 1562 people injured. Mumbai



train bombing was another serious attack in Asia that happened on July 2006 series of 7 bomb blast was heard on the suburban railway in Mumbai which resulted in the death of 209 people and wounded 714 others.

In Africa terror activities was witnessed in several countries for example there are terror groups called Boko Haram in Nigeria; in February 2016 two female suicide bombers detonated themselves in an internally displaced persons' camp in Dikwa town killing more than 70 and 78 injured; in December 2016 suicide bombers attacked the town of Madagali Bomo state killing at least 57 people and injured 177; in August 2011 Boko Haram attacked a guarded UN building in Abuja killing 23 people.

In East Africa the attacks happened in neighbouring countries of Tanzania, Uganda and the lawless country of Somalia. In 1998 there was twin attack on United State embassy in Tanzania and Kenya killing and injuring several people. In 2010 there were bomb attacks in Kampala at a venue where screening the world cup final was going on killing over 70 people and injuring many more. In January 2016 Al Shabaab militants a terror group in Somalia launched an attack on Kenyan-run AMISOM army base in El-ADDE Somalia killing more than 100 soldiers, destroying entire base and kidnapping others.

Kenya has equally suffered the consequences of this crime; this phenomenon was uncommon at Kenya's independence until the 1970s when the country was hit by the first terrorist attack targeting the Norfolk hotel. On August 7, 1998, another major attack was directed at the United States Embassy in Nairobi's central business district. This caused hundreds of deaths and hundreds injured with massive destruction of property. The cruelty of this crime is such that the casualties are massive. This is exactly what has been witnessed in the attacks in Nairobi and other parts of Kenya, all of which were directed at areas with much human activity like bus termini, churches, night clubs and even public service vehicles. Government officials including security agents have not been spared by these terrorist attacks either. On 16th October, 2011, after the kidnapping of three tourists in Lamu and two aid workers in the Dadaab refugee camps, Kenya sent its troops under "Operation Linda Nchi" to southern Somalia to fight Al Shabaab, a fundamentalist group with links to Al Qaeda. The Kenyan government intervened and coordinated with Somali and Ethiopian Armies under the African Union Mission to Somalia (AMISOM). In 2011 the Al Shabaab a terror group made two attacks one in a bar and the other at Machakos bus terminus in Nairobi killing five people and twenty others were injured (KNCHR.,2014).

In the area of study that is Wajir County and the area neighbouring it are equally affected by this scourge of terrorism as indicated by the following cases of attacks that have occurred and are documented. In April 2015, gunmen stormed the Garissa University College, killing almost 150 students who are potential workforce of this country and wounding several others. The attackers claimed to be from the Al-Shabaab militant group, and

indicated that they were retaliating over non-Muslims occupying Muslim territory.. On 22 November 2014, gunmen attacked a bus traveling from Mandera to Nairobi, killing 28 persons, mostly teachers and government workers heading to Nairobi for the December holidays. On 2 December 2014 – Al-Shabaab militants attacked and killed 36 quarry workers, many of whom were non-Muslims, near the town of Mandera (Kenya Police Service annual crime report 2015)

Bombing attacks and Employees' wellbeing

Dale et al., (2021) in their study findings noted that there is a correlation between terror activities such as bombings and organizational employees' wellbeing. Terror activities cause fear which in turn induces stress and this has negative impact on job performance. In areas where the threat of terrorism exists and especially where terrorist have been known to attack employees in this area and/or its environment must be experiencing very high level of negative stress and great challenges that affects employees and institutional performance The authors further emphasized that there is also direct relationship between terrorism and work performance, freedom from fear and freedom from hunger are the two constituent elements that determine the concept of human security, this is universal, the employer may provide you freedom from hunger but cannot guarantee freedom from fear or terrorism which is unpredictable and fleeting.

According to Soomro et al., (2023) the current workplace environment of various organizations has positive association with satisfaction of employees which leads to employees' commitment to their work and hence better job performance. Many organizations find themselves managing employees in countries characterized by substantial security risks. One such risk is terrorism that directly and indirectly affects organizations, institutions and work places .Direct effects include the destruction of organizational environment and infrastructure, death or murder and/or the kidnapping of employees, or their families through terrorism attack in their work stations, while indirect effects include the loss of colleagues and work mates in an institution, interruptions in production and disturbances in supply of goods and services that affect livelihood (Czinkota, et.al., 2010).

Studies on the impact of terror activities on organizational employees' wellbeing in Wajir county, Kenya is very important as many lives' were lost (death of Government workers and civilians), destructions of properties and more and more employees are quitting their jobs after terrorist attacks while others fear to seek employment in this areas. This drew a major security concern in the country and changed the perspective from which the government viewed terrorism. This suggests that institutions and organizations need to develop proactive anti-terrorism programs to address post-traumatic stress disorder, and prevention or evacuation strategies for employees in terrorism, conflict or post-conflict zones (Soomro et al.,2023). In response to this wave of crime, the Kenyan government has put in place measures which include establishing the anti-terrorism police unit and increasing awareness of the public on the dangers of



terrorism. There are still major milestones to be made in the fight against terrorism though. These non-state actors have become sophisticated by the day hence calling for the change in policies and general approach to this kind of crime. Therefore, the study sought to establish the effect of bombing attacks on employees' wellbeing in Wajir County, Kenya.

THEORY

Rational Choice Theory

Janice Gross Stein and Raymond Tanter are credited with advancing the use of the rational choice theory in studying economic impacts of terrorism. Stein & Raymond (1967) state that "the rational choice theory provides a methodology for assessing decision-making by using empirical evidence to understand revision and choice, thus rationalize the inferences and conclusions made by individuals". In this study, the inferences, choices and conclusions are the decisions made by terrorists to execute attacks in Wajir County targeting government employees, offices and business with the aim of affecting the employees' livelihood, raising level of insecurity and make organization, institutions and investors to close down and leave for safer areas.

According to Lindauer (2012), "the theory advocates for cost-benefit analysis and constrained utility maximization for terrorists". Its assumptions are that potential terrorists first often consider a rudimentary form of cost benefit analysis before perpetrating an attack. They then minimize the expected costs necessary to achieve a specified set of political, religious or ideological objectives and attempt to maximize their expected returns for any given level of effort.

The theory's assumption that terrorists seek to minimize costs provides insight on the choice of weapons and target groups in this area which include public transport like buses, social places like pubs, hotel and malls in Wajir for maximum impact. In most of the attacks executed in Wajir the terrorists have mostly use Improvised Explosive Devices (IEDs), which are cheaper and easier to assemble and lone suicide bombers in perpetrating lethal attacks in the area. They do so to minimize costs and maximize their expected results, which are massive carnage and destruction, which are effects this study is interested in..it is therefore necessary that the real intention of the terrorist and the challenges they pose to be undertaken for the purpose of this research, rational choice theory will therefore be helpful in that regard, helping to understand motivation behind the terrorist acts such an understanding has been largely unclear but it could be a way to helping eradicate terrorism not only in this area but Kenya and the entire world.

Objective

The main objective was to assess the effect of bombing attacks on employees' wellbeing in Wajir County, Kenya.

Hypothesis

H₀₁: Bombing does not have a statistically significant effect on the wellbeing of employees in Wajir County, Kenya.

DATA AND METHODS

Descriptive research is preferred because it is effective in depicting the relationship between the dependent and independent variables by gathering data and using visual aids for data presentation (Kothari, 2012).

Sampling Technique and Sample Size

According to Kothari (2015) a population consists of all items in any field of inquiry. The target population for the study was top level management, middle level management and senior employees which consist of 200 employees in the Security Agencies (provincial administration and NPS), Health and Education departments' and are seen as most appropriate to give out required information for the purpose of this study.

According to Connaway and Powell (2010) a sample is usually drawn because it is less costly and less time consuming to survey than the population, or it may be impossible to survey the entire population. Sample of 30% respondent of each category will be considered to provide a general view. Purposive sampling technique was used to select the ideal subjects for the study, the technique is appropriate as only those who are deemed to have information required for the study will be selected. Stratified random sampling was used to sample individuals from the various groups; the study had a sample size of 60 respondents distributed equally among the three-government department under study

Data Collection Tools and Procedure

The study used primary data which was largely quantitative and descriptive in nature. The study also employed focus group discussion guide as its data collection tools. McCusker *et al.*, (2010), points out that, questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes, accomplishments as well as experiences of individuals. McCusker *et al.* (2010) observe that questionnaires have the added advantage of being less costly and using less time as instruments of data collection. The questionnaires were semi-structured in nature, with both open and close-ended questions. While the close-ended questions will guide the respondents' answers within the choices given, the open-ended ones were useful in obtaining a more detailed response essentially in cases where the researcher has no pre-determined options.

The researcher administered the questions to the relevant respondents in an effort to achieve the necessary information. The questionnaires were administered through a drop and pick later method because of the busy schedule of the target respondents. Pre-testing enables the researcher to modify and remove ambiguous items on instruments (Kothari & Garg, 2014). The developed research instruments were pre-tested in Garissa



County as it has similar features with the area of study due to numerous terror attacks that happened in this area.

Response Rate

The study had targeted to collect data from a sample of 60 respondent distributed equally among the three-government department but the researcher managed to collect data from 44 respondents which displays a response rate of 74% of the sample which the study considered the response rate good.

Table 1: Correlation Analysis for Bombing Attacks Measures

	N	Mean	Std. Dev.
Many employees seek transfers due to fear of bombing attacks	44	3.582	.937
Most employees don't report for duties during bombing attacks	44	2.965	.936
Due to bombing attacks most employees desert their job.	44	3.452	.817
There exists staff shortage in my place of work due to bombing attacks	44	3.921	.852
Many employees have resigned due to fear of bombing attacks in Wajir County	44	3.824	.948

Source: Research Data, 2023

The study results revealed that the statement there exists staff shortage in my place of work due to bombing attacks had the highest mean of 3.921 and it was followed by the statement that many employees have resigned due to fear of bombing attacks in Wajir County with a mean of 3.824 and Many employees seek transfers due to fear of bombing attacks with a mean of 3.582. The lowest mean was report by the statement that most employees don't report for duties during bombing attacks with the mean of

Descriptive Analysis

Correlation Analysis for Bombing Attacks Measures

Bombing attacks was the third and final independent variable of this study and it was measured using five declarations and they were all exposed into descriptive investigation and the outcomes recorded in Table 1.

2.965 which was followed by the statement that due to bombing attacks most employees desert their job a mean of 3.452.

Correlation between Bombing Attacks and Employees' Wellbeing

The relationship between bombing attacks and employees' wellbeing was measured using five statements as shown in Table 2.

Table 2: Correlation between Bombing Attacks and Employees' Wellbeing

Statements	1.	2.	3.	4.	5.
1. Many employees seek transfers due to fear of bombing attacks	1				
2. Most employees don't report for duties during bombing attacks	.421**	1			
3. Due to bombing attacks most employees desert their job.	.532*	.542*	1		
4. There exists staff shortage in my place of work due to bombing attacks	.823*	.435**	.649*	1	
5. Many employees have resigned due to fear of bombing attacks in Wajir County	.463*	.436*	.428*	.572*	1

Source: Research Data, 2023

There was a strong positive and significant correlation between the statements there exists staff shortage in my place of work due to bombing attacks and many employees seek transfers due to fear of bombing attacks ($r = .823, p < .05$). The correlation between many employees seek transfers due to fear of bombing attacks and Due to bombing attacks most employees desert their job was positive and statistically significant ($r = .649, p < .05$). The statements that most employees don't report for duties during bombing attacks and Many employees seek transfers due to fear of bombing attacks had the lowest association ($r = .421, p < .05$)

and was followed by the statements that there exists staff shortage in my place of work due to bombing attacks and most employees don't report for duties during bombing attacks ($r = .435, p < .01$).

Regression Analysis

The study had presumed that there was an effect of bombing attacks on employees' wellbeing in Wajir County and the effect was statistically significant. To test this hypothesis, regression analysis was done.

**Table 3: Regression Results of Bombing Attacks on Employees' Wellbeing**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.638 ^a	.407	.326	.80774

a. Predictors: (Constant), Bombing attacks

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.212	1	.212	1.368	.029 ^b
	Residual	.621	4	.155		
	Total	.833	5			

a. Dependent Variable: Employees' wellbeing

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.476	1.891		1.838	.074
	Bombing attacks	.217	.418	.638	.519	.029

a. Dependent Variable: Employees' wellbeing

b. Predictors: (Constant), Bombing attacks

Source; Research Data, 2023

The study outcome exposed that there was a positive effect of bombing attacks on employees' wellbeing in Wajir County which was statistically significant ($\beta = .638$, p -value = .029). The influence was statistically significant because the p -value was less than the set value of .05 (p -value = .029). The results on the other hand showed that bombing attacks had instructive power on employees' wellbeing in Wajir County because it accounted for 40.7 percent of its variability (R square = .407). At the individual level, bombing attacks had positive and substantial effect on employees' wellbeing in Wajir County since the ANOVA outcomes demonstrated that the effect of bombing attacks on employees' wellbeing in Wajir County had a p -value of .029 which is more than the 0.05. Therefore, the null hypothesis was rejected.

This study outcomes concurs with those of a study by Malik, (2014) on terrorism fears and turnover intentions which found out that negative job attitudes are expected to increase employees' intention to leave the organization and thus, the following is derived overall job attitude mediates the effect of fear of future terrorism on turnover Intentions.

From the results in Table 16, the simple linear regression model that can be used to forecast the level of employees' wellbeing for a one standard deviation improvement in bombing attacks can be expressed as:

$$EW = 3.476 + 0.217BA + \epsilon$$

Where:

EW is the employees' wellbeing

BA = Bombing attacks

 ϵ is the error term

The standardized beta coefficient .217 represents the expected improvement in employees' wellbeing for a unit standard deviation improvement in bombing attacks. This can mean that, when all other factors are held constant, a one standard deviation improvement in bombing attacks would raise the level of employees' wellbeing by a factor of approximately .217 of a standard deviation.

	Null Hypothesis	Results	Reject/ Uphold
H ₀₁	H ₀₁ : Bombing does not have a statistically significant effect on the wellbeing of employees in Wajir County in Kenya.	P<0.05	Rejected

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Conclusion and Summary of the Study Findings

This segment presents summary of the study findings based on the study objective.

Effect of Bombing Attacks on Employees' Wellbeing

The correlation analysis results indicated that there was a significant and positive effect of bombing attacks on employees' wellbeing in Wajir County. The correlation analysis results showed that there was a strongest positive and significant correlation between the statements there exists staff shortage in my place of work due to bombing attacks and many employees seek transfers due to fear of bombing attacks. This shows that staff



shortage in Wajir County is as a result of bombing attacks hence affecting employees' wellbeing which leads to employees seeking transfers to other Counties. The research result goes hand in hand with Frey, Luechinger, and Stutzer (2007) who did a study on Coping with Terrorism titled 'The impact of terrorism on Aggregate output, found out that people way of saving is affected by terrorism depending on the local situation: if people are afraid, they are going to lose their saving due to terrorist attacks they will consume more, on the other hand if they expect a decline in income they increase their saving. It also agrees with another study by Enders, Hoover & Sandler, (2016) on the changing nonlinear relationship between income and terrorism" argued that for a nonlinear relationship between income and terrorism in which middle income earner is more conducive to terrorism, in poor countries the population is more focused on day-to-day survival.

Conclusions

Founded on the fact that the study outcome revealed that there was a positive effect of bombing attacks on employees' wellbeing in Wajir County, because the p-value is not more than set value of .05; the study answered the research question and hence concluded that bombing attacks had an important effect on employees' wellbeing in Wajir County. Dale et al., (2021) in their study findings noted that there is a correlation between terror activities such as bombings and organizational employees' wellbeing. Terror activities cause fear which in turn induces stress and this has negative impact on job performance. In areas where the threat of terrorism exists and especially where terrorist have been known to attack employees in this area and/or its environment must be experiencing very high level of negative stress and great challenges that affects employees and institutional performance

Recommendations

Based on the research result which revealed that there was a statistically significant effect of bombing attacks on the employee wellbeing in Wajir County the study recommends that more stringent policies and measures should be directed into reducing the bombing attacks in Wajir County and Kenya at large.

Suggestion for further research

The study findings revealed that there was a statistically significant effect of bombing attacks on the employee wellbeing in Wajir County, Kenya. A similar study can be carried out using

the same variable in another location to find out if the results will remain the same.

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CAUSES OF VICTIMIZATION: COPING UP WITH ITS EFFECTS

Marc Laurence A. Gatdula

*Master of Science in Criminal Justice with Specialization in Criminology, Cicosat Colleges, Lingsat,
City of San Fernando, La Union*

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ABSTRACT

The aim of this study, is to understand the concept of victimization, as to how and why it occurs and what are the effects towards the victims. To be able to understand and formulate recommendations which will prevent further victimization, through the conduct of Programs and Seminars. Also to encourage citizens to improved self – vigilance. Furthermore, it could help other researchers who would conduct similar study.

This study is qualitative research, and specifically considered as a case study. It is a case study, because it is an effective methodology to investigate and understand complex issues in real world settings (Harrison, H. et al., 2017). In addition, the purpose of case study must be to answer “how” or “why” questions, investigator must have little control over events, and the focus of the research must be on present – day phenomenon within a real-life context, especially when boundaries between the phenomenon and context may not be clearly evident. According to Creswell (2013). It is aimed to be understood in the perspective of the Subjects within the Province of Pangasinan.

KEYWORDS: *Victimization, Victimology, Victim, Coping Mechanism, and Crime.*

INTRODUCTION

According to Stephen Schafer, one of the earliest victimologist, that people has the responsibility to avoid the provocation of others into committing a crime against them, and also they should prevent it from its occurrence (Introduction to Victimology, 2020).

In addition, crimes may randomly occur, but there are factors which could increase the chance of an individual to be victimized. One of the factors is Lifestyle Choices, wherein depending upon the choice that was made. The higher the risk of being victimized (Understanding Victimization Risk: Lifestyle Factors & Routine Activities, 2014).

Those aforementioned statements, highly emphasized how victims plays role to their victimization. But in present, victim blaming is not an acceptable reason why victimization occurred in our Society. It is due to the reason that many victims suffered from adverse effect of being victimized. Hence, people believed that only sympathy shall be shown to them. Therefore, we should show sympathy to those who were victimized, and what are they suffering from.

In support, Victimization is an unfortunate experience which may cause damage to the physical or mental integrity of individuals or deprive them of property, causing distress or even trauma. Victimized persons are faced with the task of adapting to and coping with the harm or deprivation caused by acts of crime, According to Folkman et al., as Cited by Janssen, H.J et al,(2020).

In addition, Victims suffers from the greatest and most direct impacts of violent crime. The traumatic experience of being a victim itself may cause severe pain and suffering either physically or mentally, and in many cases this is actually the greatest impact of the crime. It may result to trauma, long term work loss or decrease in earning, a student who were victimized may suffer from lost education or decreased performance in school, (Impact of violent victimization in Canada, 2012).

According to Davis (2021), there are three effects that may occur these are emotional, psychological and social consequences. First is Emotional Impact, this pertains to feeling of anger or fearful, an individual may feel angry why did they become a victim of crime and become fearful in experiencing the same situation. Second is Psychological Impact, Victims may suffer from post-traumatic syndrome. Hence some of them will try to escape from the situation they are suffering, they will try to forget all the bad experience they have encountered when they were victimized. Some of them use a bad habit with negative impact to themselves as a coping mechanism, like alcoholism. Lastly is the Social Impact, victims may feel uncertainty with the environment. Hence, they may attempt to isolate themselves from society, with the fear of being victimized again. Being surrounded by people may cause distress to them. That may lead to struggles or problems for the victim and lastly difficulties on the performance of their work that it may affect to their daily living. Furthermore, victimization triggers many normal emotional responses: anger, rage, anxiety, fear, depression and so forth, according to Kirchoff as cited by (Introduction to Victimology, 2020).



In addition, the effects of victimization are more threatening they affect a victim psychologically, as they do not only affect the case, but may also affect the victim to the point where he/she might become a criminal himself/herself, According to Aleena Francis et al.(2016).

It is due to anger they might feel and the vengeance they want when they feel that they do not achieved satisfaction in justice they have achieved regarding to their victimization. Furthermore, the victim faces many different challenges: the shock of being victimized, dealing with the police and courts, the reactions of others, returning to “normal,” feeling unsafe, self-blame and many more. Researchers note that victims don’t seem to return to pre- crime levels of stress, although they can manage to function relatively well. Although the passage of time may give a victim the opportunity to return to a “normal” life, victimization appears to have long-lasting effects (Hagemann 1992; Norris et al. 1997; Resick et al. 2002; Gilboa- Schechtman and Foa 2001; Norris et al. 1997; Government of Canada, 2021).

In support, to better understand how hard for victim his/her experience, we should understand trauma, it typically refers to the damage done to the biological, psychological and social aspect of an individual as a result of multiple stressors, according to Peterson. Consequently, it has powerful and overwhelm effect, and threatens the safety and security, according to Puleo and McGlothlin. Furthermore, traumatic events damages the very basic perception of victims about themselves and the world they live – in, according to Jannoff – Bullman (Introduction to Victimology, 2020).

Moreover, although many individuals suffered from victimization in different parts of the world, majority of them overcome it. Victims seek help from friends, family, a member of the clergy, a counselor, or a victim assistance professional. Keeping himself/herself with someone to talk to vent out what they feel, whenever they were being overwhelmed or feel panicked about their situation (FBI, 2016). In such way they were able to calm themselves.

Apart from this, there those that avoid help, it is in relation with the active behavioral avoidance. Although avoidance is at best a temporary solution, but at worst, it ineffective and harmful to the victim (Scarpa et al. 2006; Government of Canada, 2021). Furthermore, victims who initially avoid social contacts may have increased problems, in contradiction with social support as positive coping strategies. This means that without the help from others, the victim may have hard time in overcoming his/her trauma from victimization.

In addition, victim changes his/her normal way of thinking, memory, identity or his perspective to environment. Although normally people undergo to this change, people who suffered from trauma like that of victimization also used it as a coping strategy. Furthermore, some think of it as a natural way of dealing with trauma. But at some point, dissociation may cause negative effect to the victim. Being

used for too long may cause emotional numbing and confusion which will likely to interfere in dealing with trauma (Martínez- Taboas and Bernal 2000; Halligan et al., 2003) as cited by Government of Canada (2021).

The importance of this study, is that it aims to understand the concept of victimization, as to how and why it occurs and what are the effects towards the victims. To be able to understand and formulate recommendations which will prevent further victimization, through the conduct of different Programs and Seminars which will raise the awareness of Individuals against victimization, and in worst – case – scenario if they were victimized. They will be able to overcome the after – effect of victimization. Also to encourage citizens to improved self – vigilance. Furthermore, it could also help other researchers who would conduct similar study, which could serve as basis for their study.

Objective/s of the Study

The research aims to achieve the following objectives:

1. To identify the reason why a person suffers from becoming a victim of crime.
2. To determine the effect of victimization to the person and the way they interact to society.
3. To determine self-intervention they have made to overcome after-effect of victimization.

METHODS

This study is a qualitative research, and specifically considered as case study. It is a case study, because it is an effective methodology to investigate and understand complex issues in real world settings (Harrison, H. et al., 2017). In addition, the purpose of case study must be to answer “how” or “why” questions, investigator must have little control over events, and the focus of the research must be on present – day phenomenon within a real-life context, especially when boundaries between the phenomenon and context may not be clearly evident. According to Creswell (2013), it is in relation with the aim to understand the causes of victimization and its effect towards victim. It is in relation with the aim to understand the causes of victimization and its effect towards victim. Furthermore, a combination of intensive in – depth interview and case studies were used, as we aim to investigate and understand the complex causes of victimization and its effects from those who suffered from victimization and will be based on literatures or illustrative cases which contains information related to our research topic.

Specifically, the Subjects were Victims of Crime and were be chosen using Incidental Sampling. The topic that the researchers have chosen is sensitive, hence it was only normal that only few individuals will be participating with us. Therefore, the participants were chosen on whose willing and available to participate with our study, in respect to their freedom to choose.

Consequently, this has become a constraint and limitation for our study, and the researchers has combine Incidental sampling to Quota sampling, to set a minimum number of respondents



that will preserve the reliability of our study. In gaining their consent for participation, a request letter was given to the participants, before the conduct of their interview.

After the data were collected through the conduct of interview Thematic Analysis was used to carefully analyze the data. The responses were tabulated and organized based upon the questions it responded with, and themed and categorized based on the ideas that they are portraying in relation with our study causes of victimization. It is to ensure the accuracy of the treatment of data for its interpretation.

RESULTS AND DISCUSSION

This chapter presents the analysis and interpretation of the data gathered. The data pertains to the narratives of participants based on their experiences from becoming a victim of crime and what coping mechanism they have used to overcome the trauma they have experienced after they were victimized.

1. What are the causes of victimization?

SOCIAL INTERACTION

In relation with the narrations of Participants 2, 3, and 5, it has manifested social interaction. This is reflected on the acts and situations involved therein, which led to their victimization.

According to Participant 2, It started because of basketball and we have encountered in stream, he suddenly punched me and with his accomplices they started teaming up and beat me. On the other hand, according to Participant 3, I got involved in a trouble sir, in a stream. My companion sir, it was his enemy, he suddenly got punched. While according to Participant 5, there was an occasion in our barangay, I am with my friends, we were drinking, then suddenly there was someone who came at us, I was singing and he suddenly grabbed the mic and when I did not give it to him, he punched me.

EXPOSURE TO OPEN ENVIRONMENT

In relation with the narrations of Participants 1, 4, and 6, it depicts exposure to open environment. This is reflected on the geographical location of where the crime occurred, a factor that led to their victimization.

According to Participant 1 It happened in front of our house, along the highway. In relation to the narration of Participant 4, during that time, we were on our way home from school and walking in a narrow street, known for being dangerous to public. After that I remember that there are three men following us and then it caught in my mind to rush going at terminal of public transportation. While based on the narrations of Participant 6, I am on my way home from a party, when I am walking in a corner of a street it just happened, there was a knife pointed at me.

2. What are the experiences of the victims?

PHYSICAL AND EMOTIONAL TRAUMA

According to the narratives of the participants, physical and emotional trauma are being experienced due to their victimization. This is reflected on the fear, anxiety and

injuries due to the incident they have suffered from and affects their daily lives.

Based on the narrative of Participant 1, she narrated I have suffered from slight physical injury and mild trauma due to impact of collision. As per the narratives of Participant 2 The place where Im going became limited and it has caused trauma on my part, whenever I'm seeing people loafing around I feel nervous.

In accordance with the response of Participant 3, he narrated the event has caused physical injury and fear, because they have threatened me.

In relation with the narration of Participant 4 she narrated, when it happened, when it was still fresh from my mind, I felt afraid, because it was my first time being victimized of stealing, because I don't know what will happen next, but not I'm able to move on from what happened.

According to Participant 6, I have felt afraid, since it was the first time that I have experienced it and until now I still remember the feeling when it happened.

3. What are the coping mechanism used by the victims?

SELF – SUPPORT

According to Participant 1, it was in relation with self-support. It was manifested through the act she did to deal with the Physical Trauma she suffered in. According to her Self-care because of the bruises I got.

POSITIVE MINDSET AND RELIGIOUS BELIEF

Based on the narrative respondent, Positive Mindset and Religious belief was manifested as a coping mechanism in dealing with the after – effect of victimization. This was reflected on the mindset and faith of the respondent.

According to participant 6, Maybe because of positive thinking and faith, and the belief that everything happens for a reason. I am able to move on and overcome my fear.

AVOIDANCE

Based on the narratives of participant 2 and 3, social avoidance was manifest. This was identified through their behaviors, as a coping mechanism to overcome the after – effect of victimization.

According to Participant 2, As part of my psychological healing process, I distance myself to others by staying at my room. While in accordance to narration of participant 3, I have just avoided others sir.

OTHER COPING MECHANISM

According to the participant's narrative, to cope up with the effect of victimization, you can choose to stay motivated and study hard , This is reflected in the participant's sense of Defense mechanism ,also called (Active / Positive coping) was developed to understand coping options after the incident of victimization . In the sense that can help victims effectively use time in exploring choices and learn a coping strategies appropriate to their situation.



According to participant 4, I have overcome the after effect of victimization by exerting more effort in studying.

CONCLUSIONS

In light of the findings of the study, the following are the conclusions:

1. Victimization may happen from exposing one's self to environment and through engagement with other people,
2. Experiencing victimization may affect both physical and mental well-being of an individual
3. In dealing with victimization there are coping strategies that could help individual to overcome the effects of victimization. While some, if maladaptively used may have bad effect in individuals. But it may vary, depending upon the way such strategies have been utilized.

RECOMMENDATIONS

In relation with the findings and conclusions of this research, the following are recommended:

1. On the part of the citizens, they are encouraged to become vigilant especially in situation that would put them at risk of becoming a victim of crime or places where crime could possibly occur.
2. To conduct Community Awareness Programs, which will specifically tackle how and why victimization or crime occurs and how should they deal with it when they have experienced it. In order to raise the awareness of every citizen to prevent further victimization and be able to overcome its effect when they have experienced it. It is in relation with encouragement to become more vigilant, as it will serve as basis on what courses actions should be done by individuals to avoid becoming a victim of crime.
3. To increase Police Visibility within areas where crime usually occurs, which could be determine through utilization of Crime Mapping and Crime Clock.

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EXPLORING DEMOGRAPHIC INFLUENCES ON THE ADOPTION OF THE UNIVERSAL PENSION SCHEME IN BANGLADESH

Ashish Basak¹, SK Muhammad Yeasin², Sanjana Shahnaj³

¹Assistant Professor, Department of Business Administration, Shanto-Mariam University of Creative Technology

²Assistant Professor, Department of Business Administration, Shanto-Mariam University of Creative Technology

³Assistant Professor, Department of English, Shanto-Mariam University of Creative Technology

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ABSTRACT

The Universal Pension Scheme (UPS) aims to provide financial security to Bangladeshi citizens through a structured pension plan. This study investigates how income level, educational attainment and age influence the adoption of the UPS. We hypothesized that these demographic factors significantly affect participation in the scheme. Utilizing a quantitative approach, data from 463 participants was analyzed using chi-square testing and descriptive statistics. The results indicate a significant association between income level, education, and age with UPS adoption. Specifically, higher income, greater educational attainment, and younger age correlate with higher adoption rates. Despite a positive overall outlook, a substantial portion of participants remain uninterested or require more information. Addressing awareness and affordability issues could enhance adoption. This study highlights the importance of tailoring promotional strategies to diverse demographic factors to effectively increase UPS participation and ensure broader financial security.

KEYWORDS: Universal Pension Scheme; Social Wellbeing; Demographic Factors; Bangladesh

INTRODUCTION

The average life expectancy of people in Bangladesh is currently 72.3 years, but the average life expectancy is likely to increase further in the future (BBS,2015). The country is enjoying the benefits of demographic dividend. Currently about 62% of our total population is working. The number of people above 65 years is about 7% of the total population who are mainly dependent on the working population (Bangladesh Sangbad Sanstha, 2023). By 2050 this number will increase to 25%. At the same time, due to increase in the average life expectancy and rise in the number of single households the dependency ratio will increase in the future (CIA World Factbook. (2018). So it is necessary to build a sustainable social security structure. If it is possible to bring the population above the age of 18 years under the Universal Pension Scheme (UPS), they will be covered by a well-organized social security structure (Barkat-e-Khuda. (2011). The target has been set to bring 10 crore citizens of the country under the universal pension scheme. If this system is implemented effectively, the social security of our elderly population will be ensured (Banks & FIs.,2023).

The government has already started its activities by establishing the National Pension Authority. The Universal Pension Management System has been developed on a complete IT platform. It is noteworthy that 16,600 people have registered in the public pension scheme, against which 19 crores taka have been deposited till December 5, 2023 (Bangladesh Sangbad

Sanstha, 2023) . In Universal Pension Scheme, 18 to 50 years old beneficiary has to pay subscription until 60 years of their age and above 50 years old beneficiary has to pay for 10 years to receive pension until their death. Any Bangladeshi citizen working or staying abroad can also participate in this scheme. There are several Universal Pension Schemes in place such as Probash, Progoti, Surakkha and Samata. Pensioners can choose their appropriate scheme according to their age and income level (Bangladesh Sangbad Sanstha, 2023).

Objectives:

- 1) To assess how income level influences the adoption of the Universal Pension Scheme.
- 2) To evaluate the effect of educational level on the adoption of the Universal Pension Scheme.
- 3) To analyze the impact of age on the adoption of the Universal Pension Scheme.
- 4) To assess the perception of the investors about the Universal Pension Scheme.

LITERATURE REVIEW

The Universal Pension Scheme (UPS) is introduced in a large number of countries in various forms. The variations of UPS are visible across the world. As per the report of ILO 2017, 186 countries have adopted at least one pension scheme for elderly citizens (ILO 2017). However, as per ILO (2021), only 46.9% of the people of the world are effectively covered by at least one



social benefits scheme. Though average public expenditure on social protection is 12.9% of GDP, Low-income countries are spending only 1.1%, Lower-middle income countries are spending 2.5%, Upper-middle income countries are spending 8%, where High-income countries are spending 16.4% of GDP (ILO, 2021).

Therefore, an effective social protection scheme, as well as effective UPS is expected in the developing countries. In China, the challenges of demographic transition have been identified as a critical factor in the framework of pension schemes (Chai & Cheng, 2014). Therefore, a hybrid system (between DCand DB) has been proposed in China. Conditional defined benefit (DB) and notional defined-contribution pension systems have been discussed in the context of China (Williamson & Shen,2004). Moreover, it has been mentioned that the lack of integrated institutional efforts (Freedman& Yanxia, 2016).

In Sub-Saharan African countries, too much generalization has been seen as a problem for an effective pension scheme for the senior citizens. Lack of institutional capacity has been identified as a problem in implementing the effective social security scheme in African countries as well (Thovoethin & Ewalefoh, 2018). Therefore, Thovoethin & Ewalefoh (2018) argue for the social context and existing institutions' compatible social protection schemes for the senior citizen in the Sub-Saharan African countries. They urged for a pluralistic social scheme combining both the contributory and non-contributory approaches considering the context and through various mechanisms, e.g., tax incentives. In African countries, lack of interest among the citizen has been found as a major challenge to implement the UPS as well. Considering the situation in India, four critical areas have been identified for an effective pension scheme (Narayana, 2019). Narayana (2019) identified adjustment of inflation in the expenditure, economic growth, continuous correction of inclusion and exclusion of errors are the major Challenges of the pension scheme in India.

Article 15 of the Bangladesh constitution requires the state to guarantee "the right to social security." According to (Bach, 2003), "social security" embodies the financial assistance given by the government that assists those with low or no income. All residents will receive social security benefits under the Universal Pension Scheme, which is dedicated to ensuring that no one is left behind from birth to death. The UPS was previously described in the National Social Security Strategy (NSSS) 2015 and the Seventh Five-Year Plan (7FYP). The Universal Pension Management Bill 2022 was approved by the Bangladesh Parliament on January 24, 2023 (Zaman, 2023).

However, given the current demographic trend, it is predicted that by 2051, nearly 20% of Bangladesh's population will be over 60 (BBS, 2015). The elderly population of Bangladesh currently lacks access to pension schemes. The older population has been impacted by poverty and landlessness as a result of the current socio economic landscape (Dulal, 2016). The magnitude of the pension benefit (expressed as a proportion) and the length of service have an immediate association. Both public and corporate pension plans have proven this assertion to be accurate. According to Bangladesh's regulatory framework for the pension system, managing pension funds is difficult because there is no single complete legal guidance for the pension system (Mamun & Hossain, 2022). In addition, (Khondker B. H. & Razzaque , 2018) advanced a compelling argument for a universal social pension scheme for Bangladesh in conjunction with the high rates of poverty and lower labor market engagement among the elderly, who also frequently have inadequate access to credit. Finally, as the government has issued this Universal Pension Scheme, there emerge other challenges regarding its acceptance in the society by the citizens.

The authors develop the study framework as follows in light of the aforementioned description.

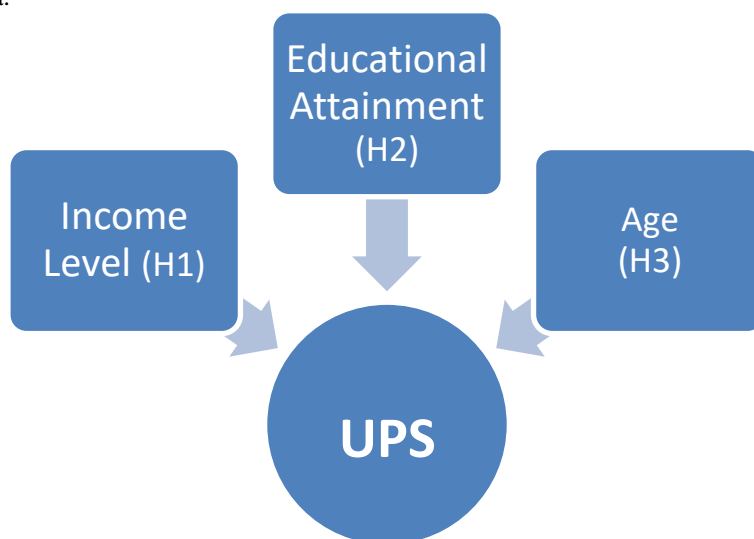


Figure 01: Study Framework developed by the researchers.



Based on the conceptual framework, this study develops three hypotheses. Flowing hypotheses are developed for this study.

Hypothesis 01: There is a significant association between the income level and the adoption of Universal Pension Scheme.

Hypothesis 02: There is a significant association between the educational level and the adoption of Universal Pension Scheme.

Hypothesis 03: There is a significance association between the age limit and the adoption of the Universal Pension scheme.

METHODS

This study uses a quantitative method. Data was collected from 463 participants aged over 18 years old as the UPS is eligible for Bangladeshi citizen aged between 18 to 50 years according to

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.383E2 ^a	30	<.001
Likelihood Ratio	446.558	30	<.001
N of Valid Cases	463		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 37.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.835	<.001
	Cramer's V	.565	<.001
N of Valid Cases		463	

The Pearson Chi-Square statistic is significantly large, with a p-value of <.001. This indicates that there is a statistically significant association between the variables future plan about UPS and the level of income. Since the p-value is much less than the common alpha level of 0.05, we reject the null hypothesis, which suggests that there is a significant relationship between the categorical variables. The Likelihood Ratio statistic also has a very small p-value (<.001), further supporting the conclusion that there is a significant association between the variables future plan about UPS and the level of income. This test is an alternative to the Pearson Chi-Square test and similarly indicates that the relationship between the variables is not due to chance. The Phi coefficient is a measure of association, the value of .835 is quite high, which suggests a strong association between the future plan about UPS and the level of income. Since the p-value is <.001, this association is

their National Identity card. The data collection was done using a close ended questionnaire following the simple random sampling method. The SPSS software was used to analyze the data for chi square testing and descriptive statistics.

RESULTS AND DISCUSSION

Our first objective was to assess the impact of the income level on the adoption of Universal Pension Scheme and following hypothesis was developed:

- **Null Hypothesis (H₀):** Income level has no effect on the adoption of the Universal Pension scheme.
- **Alternative Hypothesis (H₁):** Income level has a significant effect on the adoption of the Universal Pension scheme.

statistically significant. Cramer's V is a measure of association for nominal data and ranges from 0 (no association) to 1 (perfect association). A value of .565 suggests a moderate to strong association between the variables. The statistical significance is confirmed by the p-value of <.001, indicating that the strength of the association is not due to random chance.

Our second objective was to assess the impact of the educational level on the adoption of Universal Pension Scheme and following hypothesis was developed:

- **Null Hypothesis (H₀):** Educational level has no effect on the adoption of the Universal Pension scheme.
- **Alternative Hypothesis (H₁):** Educational level has a significant effect on the adoption of the Universal Pension scheme.



Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.097E2 ^a	30	<.002
Likelihood Ratio	377.229	30	<.002
N of Valid Cases	463		

a. 0 cells (0%) have expected count less than 5. The minimum expected count is .37.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Phi	.883	<.002
Cramer's V	.554	<.002
N of Valid Cases	463	

The Pearson Chi-Square value of 709.7 with 30 degrees of freedom is associated with a very small p-value (<.002), indicating a highly significant result. This means that there is a statistically significant association between the Future plan about UPS and the Level of Education. The Likelihood Ratio test also shows a significant p-value, reinforcing the result from the Pearson Chi-Square test. Both tests suggest that there is a strong association between the variables. A Phi coefficient of .883 is quite high, suggesting a strong association between the Future plan about UPS and the Level of Education. A Cramer's V of .554 indicates a moderate to strong association between the Future plan about UPS and the Level of Education.

Our third objective was to assess the impact of the age level on the adoption of Universal Pension Scheme and following hypothesis was developed:

- **Null Hypothesis (H₀):** Age level has no effect on the adoption of the Universal Pension scheme.
- **Alternative Hypothesis (H₁):** Age level has a significant effect on the adoption of the Universal Pension scheme.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.366E2 ^a	25	.000
Likelihood Ratio	334.067	25	.000
N of Valid Cases	463		

a. 0 cells (0%) have expected count less than 5. The minimum expected count is .37.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Phi	.765	.000
Cramer's V	.524	.000
N of Valid Cases	463	

The Pearson Chi-Square test assesses whether there is a significant association between the Future plan about UPS and the age level. A high chi-square value (636.6) and a very low p-

value (.000) suggest a significant relationship between the Future plan about UPS and age level. The null hypothesis, which states that there is no association between the variables



Future plan about UPS and the age level, can be rejected. In other words, the data provides strong evidence that the variables are not independent of each other. The Likelihood Ratio test is an alternative to the Pearson Chi-Square test and assesses the same hypothesis. The significant result (p-value of .000) confirms the finding from the Pearson Chi-Square test that there is a significant association between the Future plan about UPS and the age level. Phi Coefficient value of .765 suggests a very strong relationship

between the variables. A Cramer's V value of .524 indicates a moderate to strong association between the variables.

Finally, we have tried to find out the perception of the investors about the Universal Pension Scheme. The opinion of the pensioners varies according their income level, educational qualification and the age limit.

Future plan about UPS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	13	2.8	2.8	2.8
I have already taken up the Scheme	64	13.8	13.8	16.6
I must take up the scheme	87	18.8	18.8	35.4
I am thinking about the scheme	41	8.9	8.9	44.3
I need more information about the scheme	102	22.0	22.0	66.3
I am not interested about the scheme	156	33.7	33.7	100.0
Total	463	100.0	100.0	

According to the finding 13.8% of the pensioners have already taken up the scheme and 18.8% of the participants is committed to enroll with the universal pension scheme. However, 8.9% of the participants are interested about the scheme and 22% of the participants need more information in making their mind about

the scheme. Unfortunately, 33.7% of the participants are reluctant about the universal pension scheme and different reasons have been mentioned for not taking up the UPS.

Reasons not to take up the UPS

	Frequency	Percent	Valid Percent	Cumulative Percent
Positive about the UPS	288	62.2	62.2	62.2
Don't aware about the scheme	48	10.4	10.4	72.6
Don't have confidence on the scheme	40	8.6	8.6	81.2
Age - too old to take up the scheme	15	3.2	3.2	84.4
Cannot afford to subscribe for the scheme	41	8.9	8.9	93.3
Better to invest in other investment	13	2.8	2.8	96.1
Others	18	3.9	3.9	100.0
Total	463	100.0	100.0	

Although, 62.2% of the participants are positive about the universal pension scheme but rest of the participants have shown different reasons for their unwillingness. About 10.4% of the participants are not aware about the scheme and 8.6% of the participants don't have confidence on the scheme. Another 8.9% of the participants cannot afford to subscribe for the scheme and 3.2% of the participants have shown their opinion that old age is the factor not for taking up the scheme. 2.8% of the participants think that it's better to invest somewhere else. Finally, 3.9% of

the participants have shown other reasons not for taking up the scheme.

CONCLUSION

In conclusion, this study investigated the influence of income level, educational attainment, and age on the adoption of the Universal Pension Scheme (UPS) and explored investor perceptions regarding the scheme. The analysis revealed a significant association between income level and the adoption of



UPS. High-income individuals are more likely to adopt the scheme, with a strong association indicated by both Pearson Chi-Square and Likelihood Ratio tests, as well as high Phi and Cramer's V values. This suggests that income level plays a crucial role in determining one's likelihood to adopt the UPS, possibly due to financial capability and perceived benefits of the scheme. Similarly, educational level significantly impacts UPS adoption. The Chi-Square results show a strong relationship between education and adoption, supported by high Phi and Cramer's V values. Educated individuals are more likely to understand and value the benefits of the UPS, leading to higher adoption rates. This highlights the importance of education in influencing financial decision-making and pension planning. Age also significantly affects UPS adoption. Younger individuals are more inclined to consider or adopt the scheme, as evidenced by the high Chi-Square statistic and significant p-value. The strong Phi coefficient and moderate to strong Cramer's V value suggest that age is a critical factor, with younger participants being more engaged and proactive about their pension planning. Investor perceptions reveal a mixed response towards the UPS. While a majority express positive sentiments about the scheme, a significant proportion remains uninterested or requires more information. Notable reasons for reluctance include lack of awareness, confidence issues, and affordability concerns. Addressing these issues through improved awareness campaigns and targeted communication could enhance adoption rates.

Overall, these findings underscore the need for tailored strategies to promote the UPS, considering income, education, and age factors, while also addressing barriers to adoption identified through investor feedback.

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EFFECT OF GOVERNANCE STRUCTURES ON RETURN ON INVESTMENTS OF OCCUPATIONAL PENSION SCHEMES IN KENYA

Ogutu Achar Zachayo¹, Dr. Edmund Gathuru (PhD)², Dr. Patric Gudda (PhD)³

¹Maasai Mara University, 20500-861, Kenya, <https://orcid.org/0000-0002-2214-8618>

²Maasai Mara University, 20500-861, Kenya

³Maasai Mara University, 20500-861, Kenya

ABSTRACT

Pension funds are a principal source of retirement income and an essential contributor to economies' gross domestic product (GDP). Occupational Pension Schemes, a subset of pension funds, have been the most vulnerable to governance malpractices in Kenya, resulting in the loss of billions of pension assets and low returns on investments. Therefore, this study sought to investigate the effect of governance structures on the return on investments of occupational pension schemes in Kenya. The research was anchored on the Agency theory. A causal research design was employed. The study targeted a population of one hundred and fifty (150) occupational pension schemes registered by the Kenya Retirement Benefits Authority as of December 2021. A census sampling technique was applied where the entire target population was selected. The study used primary data collected using questionnaires tested for validity and reliability. Pearson correlation analysis was used to test the association and direction between governance practices and return on investments. It was established that governance structures had a strong positive association with return on investments ($r=0.591$). The study findings revealed that the critical t -value was higher than the tabulated-values. This led to rejecting the null hypothesis that corporate governance structures has no significant effect on return on investments of occupational pension schemes in Kenya. The study concludes that governance structures positively and significantly affect the return on investments of occupational pension schemes in Kenya. As a result, the study recommends that occupational pension schemes should always embrace governance structures and the initiative to seal existing governance lapses.

KEYWORDS: Governance structures, return on investments, occupational pension schemes, firm size, and SACCOs.

1.1 INTRODUCTION

Pension funds, undoubtedly crucial to retirement planning, are the cornerstone of financial security during an individual's post-employment years (Lipshitz & Walter, 2019). However, their significance extends far beyond their role as individual financial vehicles. They play a pivotal role in shaping the economic well-being of nations, and this role is emphasized in global and regional studies (World Bank, 2020). These occupational pension schemes, a subset of pension funds, function as catalysts for economic growth by astutely channeling capital into a multitude of investment avenues, in turn invigorating economic activities (Palmer, 2019). The contribution of occupational pension funds to a nation's Gross Domestic Product (GDP) is monumental, a theme that reverberates in numerous global and regional studies (Palmer, 2019; World Bank, 2020).

The operation of occupational pension funds globally is a subject of extensive research (Natali, 2018). Studies underscore the pivotal role of these funds in the global economy, where they represent massive pools of savings that are meticulously allocated across various investment channels (Magnani & Sanfelici, 2023). These channels encompass various assets, including government and private bonds, equities in various markets, real estate holdings, and other income-generating instruments (Wambua et al., 2023). The efficient deployment of these funds yields far-

reaching consequences for individual retirees' financial security and the broader economic landscape. They function as essential cogs in the machinery of economic stability. For instance, the World Bank (2020) highlights the global significance of pension funds, particularly their contribution to long-term investment and economic development. These findings resonate with regional studies, which consistently underscore the crucial role of pension funds in supporting economic growth across different regions (Giles et al., 2023).

In the Kenyan context, occupational pension funds and their role in economic development are emblematic of global trends and regional experiences (Akwimbi, 2022). Occupational Pension Schemes, designed to safeguard employees' retirement savings, have undergone a substantial transformation in alignment with international paradigms (Akwimbi, 2022). These schemes have evolved from traditional Defined Benefit (DB) plans to the contemporary structure of Defined Contribution (DC) plans. This transformation is rooted in global concepts emphasizing the transfer of risks from sponsoring companies to individual scheme members (African Development Bank, 2018). Under DC plans, the financial performance and, by extension, the returns of these schemes are intricately linked to the efficiency of their management and the overall performance of the assets they hold (Flute, 2019). The retirement benefits of scheme members are



directly contingent on the returns and performance of these schemes (Akwimbi, 2022). However, the local landscape of occupational pension schemes in Kenya has been full of governance challenges, leading to mismanagement and substantial losses of pension assets (Akwimbi, 2022). These challenges extend beyond retiree financial security, potentially influencing the broader economy and GDP, aligning with global and regional studies emphasizing the significance of well-managed pension funds in economic development (ILO, 2018; African Development Bank, 2021).

Acknowledging the multifaceted nature of these challenges, this study explored the intricate relationships between governance structures within Kenyan occupational pension schemes and their influence on investment returns.

1.2 Statement of the Problem

Occupational pension schemes are vital for accumulating retirement savings and ensuring financial security for retirees through investment returns (Lipshitz & Walter, 2019). However, governance issues have led to poor investment decisions, resulting in failures to meet obligations and burdening retirees (Bonizzi et al., 2023). In Kenya, trustees' short-sighted, high-risk decisions and governance malpractices have led to low investment returns and a loss of investment value (Akwimbi, 2022). This is in contrast to regions like the USA and Europe, which managed significant pension assets, achieving substantial real investment returns (Konradt, 2023). In Kenya, the pension industry experienced a -9.9% real return, leading to substantial losses of Ksh. Seventeen billion (\$200 million) in 2019 (Chumba, 2019). Despite growing awareness of corporate governance principles, research has yet to fully understand the impact of governance structures on investment returns in Kenya (Kato, 2021; Akwimbi, 2022). Given the unique risks faced by pension funds, this study seeks to bridge this knowledge gap and improve the management of pension schemes for financial security and economic stability in Kenya.

1.3 Objective of the Study

To determine the effect of governance structures on return on investments of occupational pension schemes in Kenya.

1.4 Research Hypothesis

H₀: Pension funds governance structure has no significant effect on return on investments of Occupational Pension Schemes in Kenya

1.5 Significance of Study

This study's findings and conclusions hold significant relevance to various stakeholders. Firstly, policymakers in Kenya's pension fund sector will gain a comprehensive understanding of the factors influencing the financial efficiency of pension schemes, aiding in formulating strategies for enhancing scheme performance. Additionally, the government can use these insights to design appropriate regulations for the sector, ultimately contributing to economic stability. For contributors to pension

funds, understanding how well their investments are growing is essential as it directly impacts the returns they receive at retirement. This study adds to the existing literature on the economic performance of pension schemes, making a valuable contribution to the field and serving as a foundation for future research on the interplay between corporate governance and pension fund performance.

2.1 THEORETICAL FRAMEWORK

2.1.1 Agency Theory

Agency theory, pioneered by Jensen and Meckling in 1976, underscores the imperative of delineating roles and responsibilities between principals and agents within organizational frameworks. This theory posits that the widening chasm between ownership and control in large enterprises, often driven by diminishing equity ownership, creates an environment wherein managers may prioritize their self-interest over maximizing shareholder returns (Roshan, 2016). Top-tier managers, frequently holding stakes in their companies, are incentivized to make decisions that bolster the firm's value. Furthermore, these managers are selected and retained by boards of directors, who are themselves elected by stockholders (Berk & De Marzo, 2017).

Numerous studies underscore the pivotal role of agency theory in comprehending corporate decision-making and governance (Jensen & Meckling, 2016; Kyere & Ausloos, 2021). For instance, research by Jensen and Meckling (2016) elucidates that conflicts of interest tend to manifest, particularly in scenarios of financial distress, where managerial decisions are geared towards safeguarding shareholders' interests at the expense of creditors. Furthermore, agency theory postulates that the optimization of the capital structure may ensue from the minimization of costs arising from conflicts of interest among the diverse stakeholders within the firm (Jensen & Meckling, 2016).

Nevertheless, critics posit that the pecking order theory contradicts the notion of optimal investment decisions advanced by agency theory (Jarallah et al., 2019). The pecking order theory contends that firms do not adhere to a specific investment hierarchy, and their financing choices are primarily contingent on earnings. Typically, firms resort to debt financing only when their earnings fall short of expectations, and external financing is contemplated only as a last resort (Petraki, 2012).

Notwithstanding the debate, the relevance of agency theory in the context of the study on the "Effect of Governance Structures on Return on Investments of Occupational Pension Schemes in Kenya" is undeniable. This is because the theory highlights the profound impact of management decisions on investment outcomes, suggesting that factors extending beyond conventional financial metrics can significantly influence the performance of pension funds. Among these factors, the role of corporate governance stands out as a critical determinant, reaffirming the importance of agency theory in this study.

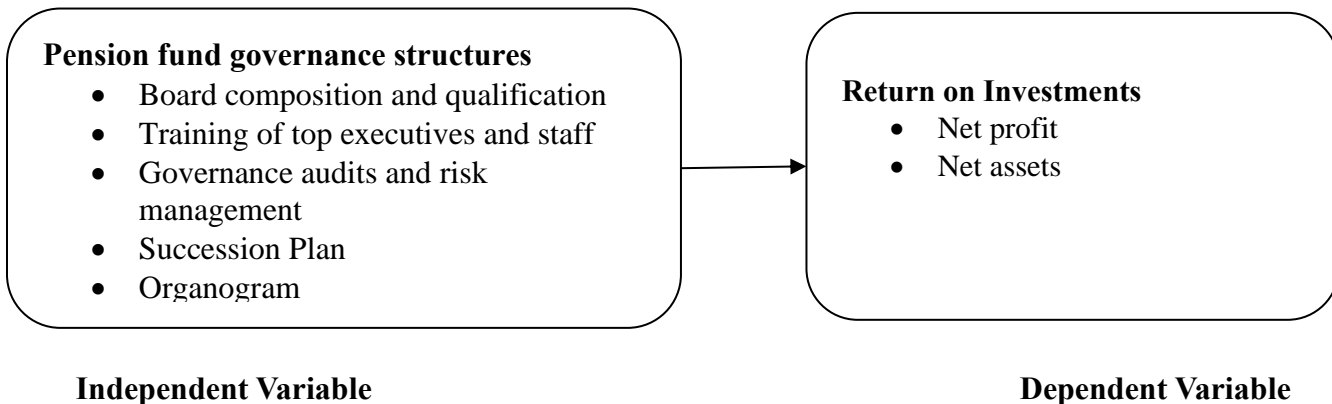


2.2 The Conceptual Framework

The study was guided by a conceptual framework (Figure 2.1), with governance structures as the independent variable and return

on investments of occupational pension schemes as the dependent variable.

Figure 2.1: The Conceptual Framework



Source (Author,2023)

2.3 Empirical Review

In the extensive study conducted by Rossi (2016), spanning a remarkable three decades from 1980 to 2009, the examination of 50 occupational pension schemes in Spain revealed critical insights into the profound impact of corporate governance on pension fund profitability. This intricate research deployed a repertoire of advanced econometric techniques, including pooled OLS and fixed effects, to scrutinize the intricate dynamics governing pension fund performance. Metrics such as pension unit return, Sharpe ratio, ROA, and ROE were meticulously analyzed. What set this study apart was its meticulous attention to detail, incorporating firm-year fixed effects to accommodate the evolving landscape of unobserved country characteristics over time. The findings of this research vehemently advocated for a merit-based approach in the selection of trustees and CEOs, underlining the necessity of a rigorous fit and proper person test, accompanied by penalties for any potential abuse of office. The study also eloquently emphasized the paramount importance of fostering diversity within the pension fund trustee board, comprising a wide spectrum of skills, experiences, and educational backgrounds, thereby cultivating an environment conducive to creativity and ensuring a comprehensive array of perspectives. However, the contextual uniqueness of the stringent governance compliance in Spain calls for caution when considering the direct transferability of these findings to the Kenyan landscape.

Mabbett (2017), embarked on a deep-dive into the world of pension funds, specifically focusing on 2580 defined contribution (DC) pension funds operating in Poland. Over an exhaustive timeframe that spanned from 1999 to 2016, Mabbett diligently observed these funds' operations, rigorously scrutinizing their performance. What set this study apart was its deliberate effort to mitigate potential biases, which often plague studies of this

nature. By virtue of an extensive dataset, concerns related to sample selection and the influence of varying institutional frameworks were significantly addressed. What rendered this research particularly intriguing was the timing of its exploration, which coincided with a period of dynamic changes within the pension fund landscape. This context provided an invaluable backdrop for evaluating the profound influence of various governance factors. Nevertheless, despite the comprehensiveness of this study, the findings surfaced a rather unexpected trend - a tenuous overall relationship between corporate governance and returns. One must, however, be mindful of the fact that this study primarily concentrated on defined contribution firms, prompting pertinent questions regarding its applicability to the broader spectrum of pension funds.

Bhagat and Bolton (2018), delved deeply into the intricate landscape of governance quality. The core challenge they grappled with was the endeavor to establish a definitive causal link between governance and returns, an undertaking fraught with complexities owing to the potentially endogenous nature of these variables. Their research was meticulously set in the dynamic and multifaceted Indian corporate context, spanning an extensive survey of 370 firms from the years 2003 to 2018. The crux of their investigation revolved around the creation of a comprehensive governance index. This index, a sturdy construct, incorporated vital dimensions such as the composition of the board of directors, the intricacies of ownership structures, the functionality of audit committees, and the role of the external auditor. The findings that emerged were notably intriguing, pointing to a more pronounced relationship between the governance index and market value, especially within the ambit of larger firms. However, the research did not discover a significant influence of corporate governance scores on diverse measures of financial performance. This pivotal discovery became the lodestar that guided the current study,



redirecting its focus towards returns on investments, a metric of paramount importance.

Hatchett et al. (2015), cast a revealing light upon the labyrinthine dynamics at play within corporate boards. This study unearthed a particularly fascinating revelation – the presence of a majority of independent directors was positively correlated with return on equity. Astonishingly, their findings indicated a negative correlation between board size and key metrics like ROI and EVA, shedding light on a dimension of governance that required further exploration. Notably, this study was conducted within the unique context of large European corporations, post the implementation of the Companies' Act 2013, meticulously examining various factors, including board diversity, the duality of the CEO, board compensation, and the extent of promoters' involvement in company affairs. In a parallel endeavor, Arora and Sharma, in 2016, ventured into the terrain of corporate governance in the Indian manufacturing sector, uncovering a tenuous relationship between corporate governance and performance in the European context. They also underscored the adverse effects of larger boards on firm performance, while remarkably identifying a positive correlation between the frequency of board meetings and the return on assets (ROA). Nevertheless, it is imperative to acknowledge that these studies were executed within the precincts of advanced economies, boasting stringent governance regulations, which, in contrast, prompts questions about the direct transferability of their findings to the unique and evolving landscape of Kenyan pension schemes.

Simbarashe et al. (2016), embarked on a research journey that intricately explored the political influence on corporate governance in Kenya. Their meticulously gathered data revealed a striking reality - a significant proportion of boards within the Kenyan context featured at least one outsider with political connections. The recommendations set forth by this study carried a substantial weight. They fervently advocated for the cultivation of a balanced mix of employee or member-nominated trustees, serving as a complement to sponsor-appointed trustees. This balanced approach sought to strike a harmonious equilibrium between individuals actively employed and those in optional membership within the pension funds, thereby ensuring a blend that catered to both long-term and short-term interests. However, it's essential to consider that this study employed an experimental methodology, a fact that distinguishes it from the current study's preference for a correlational design. This approach, known for its more direct relationship between variables, while also being notably more time and cost-effective, presents an enticing avenue for investigation.

3.1 RESEARCH METHODOLOGY

The study employed the causal research design to collect raw data and establish cause-and-effect relationships between dependent

and independent variables, allowing the creation of data structures modeling variable relationships (Mugenda & Mugenda, 2003). The target population included all registered occupational pension schemes in Kenya, totaling 150 funds categorized by asset values into large and small firms, with managing trustees or chief executive officers as respondents (RBA, 2021). A census approach was employed to ensure accuracy and minimize population representation bias (Kothari, 2004; Ritchie & Lewis, 2003).

Primary data was collected through a structured questionnaire using Likert scale responses to gauge the impact of corporate governance on returns on investments from managing trustees or chief executive officers of occupational pension schemes (Kothari, 2004; Orodho, 2009; Cohen et al., 2013). The questionnaire underwent pilot testing with 5 pension schemes to identify and rectify any issues, ensuring validity and alignment with research objectives (Cresell & Miller, 1997). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) validated the instruments with KMO values exceeding 0.4 (Author, 2023).

Reliability was established through Cronbach's coefficient alpha, with all alpha coefficients exceeding 0.7, ensuring the instruments' reliability (Author, 2023). Data analysis encompassed descriptive and inferential statistics, using techniques such as Pearson correlation coefficient, Analysis of Variance (ANOVA), and regression analysis to explore the relationships between corporate governance and return on investments.

The regression model employed for this study was defined as:

$$Y = \beta_0 + \beta_1 X \dots \dots \dots 1.1$$

Y represents Returns on Investments, β_0 is the Constant, β_1 denotes the slope parameter, and X represents governance structures. Diagnostic tests, including assessments for heteroskedasticity, multicollinearity, autocorrelation, and normality of residuals, were conducted to ensure the reliability and validity of the regression model (Keith, 2019).

By adhering to this research methodology, the study aimed to effectively collect, analyze, and interpret data, ultimately providing insights into the effect of governance structures on returns on investments in occupational pension schemes in Kenya.

4.1 DATA ANALYSIS, RESULTS AND DISCUSSION

This study aimed to elucidate the effect of governance structures on the investment returns of occupational pension firms in Kenya. Respondents were required to show their level of agreement or disagreement with governance structure statements using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Descriptive statistics were computed, and the findings are summarized in Table 4.1.

**Table 4.1: Summary of Descriptive Statistics**

Statements	Mean	SD
Governance Structures	3.9278	.94430
Valid N	123	

Source: (Research data, 2023)

The data in Table 4.1 reveals that on a scale of 1-5, most of the firms agreed that the governance structures policies outlined significantly influenced returns on investments of occupational pension firms ($M=3.9278$, $SD=.94430$). These findings indicate that governance structure policies have a significant effect on investments of occupational pension firms. The findings are consistent with the studies conducted by Ammann and Ehmann (2017) and Johnson (2020), which similarly emphasized the pivotal role of governance structures in influencing investment outcomes in pension firms. Additionally, the work of Brown and Lee (2019) and Clark (2020) provided further support for these findings, highlighting the integral connection between governance policies and investment performance. In contrast,

Bebchuk et al. (2017) proposed that governance structures may not be the sole determining factor in investment returns, highlighting the complex interplay of various elements. Additionally, Black and Grey (2019) suggested that while governance is essential, other external factors might substantially influence investment outcomes.

The data was subjected to further scrutiny through Pearson's Correlation analysis to determine whether a correlation existed between governance structures and the return on investments of occupational pension firms in Kenya. The results are presented in Table 4.2.

Table 4.2: Pearson's Correlation Analysis between Governance Structures and Return on Investment

Returns	Governance Structures	
	Pearson Correlation	.591**
	Sig. (2-tailed)	.000
N		123

Source, (Research data,2023)

*. Correlation is significant at the 0.05 level (2-tailed).

The findings in Table 4.2 demonstrate a robust, positive, and statistically significant association ($r = 0.591$, $p = 0.000$) between governance structures and investment returns in Kenya's occupational pension firms. This underscores that governance structures influence the returns of investments within occupational pension schemes in Kenya.

These findings concur with the studies conducted by Johnson (2020) and Smith et al. (2021), which similarly emphasized the substantial impact of governance structures on investment outcomes in pension firms. Moreover, Brown and Lee (2019) and Clark (2020) further corroborated these findings, emphasizing the crucial link between governance policies and investment

performance. In contrast, the studies by Bebhuk et al. (2017) and Davis (2017) presented dissenting opinions, suggesting that governance structures may not significantly affect investment returns in occupational pension schemes.

The study sought to determine the effect of governance structures on the investment returns of pension schemes in Kenya. To achieve this, the study tested the null hypothesis, which stated:

H_0 : Governance structures have no significant effect on investment returns of occupational pension schemes in Kenya.

The analysis was done using simple linear regression; the results are shown in Table 4.3.

Table 4.3: Regression Coefficients for Governance Structures

R^2	β	F	t	p
.405	.498	46.72	10.364	0.000

Source (Research data,2023).

Table 4.3 illustrates a satisfactory goodness fit for the regression model, shedding light on the intricate relationship between governance structures and investment returns in Kenyan occupational pension schemes. The R^2 value of 0.405 denotes that approximately 40.5% of the investment returns within Kenyan

occupational pension schemes can be ascribed to the influence of governance structures. Notably, governance structures wield substantial influence over investment returns in Kenyan occupational pension schemes, as evidenced by the F-value of 46.72 ($p < 0.05$). The null hypothesis posited that governance



structures have no significant effect on investment returns within Kenyan occupational pension schemes was emphatically refuted, as corroborated by the t-value of 10.364, surpassing the critical t value, with a P value below 0.05.

These results unequivocally emphasize the pivotal role of governance structures in molding investment returns within pension schemes in Kenya. These findings are consistent with the research conducted by Anderson (2019) and Lee et al. (2020), which similarly underscore the substantial impact of governance structures on investment outcomes in pension firms. However, these results starkly contrast the viewpoints put forth in the studies by White and Brown (2018) and Martinez (2017), which suggested that governance structures may not significantly affect investment returns in occupational pension schemes. Nonetheless, it is worth noting that these dissenting perspectives constitute a minority, with the preponderance of existing literature aligning with the findings of this study, reinforcing the critical role of governance structures in shaping investment outcomes within occupational pension firms.

5.1 CONCLUSION AND RECOMMENDATION

The study unequivocally establishes that governance structures play a significant and positive role in influencing the return on investments of occupational pension schemes in Kenya. It aligns seamlessly with the core tenets of the Agency theory and prior studies emphasizing the importance of well-structured governance frameworks in harmonizing stakeholder interests and fostering prudent decision-making. The research firmly underscores that implementing effective governance practices is paramount in safeguarding the welfare of occupational pension scheme members while optimizing investment returns. This highlights the indispensable nature of robust governance in elevating the overall performance of these occupational pension schemes.

In light of these findings, the study strongly recommends that occupational pension schemes in Kenya make a concerted effort to prioritize and uphold stringent governance structures. This can be achieved by establishing transparent and accountable decision-making processes, appointing qualified and capable trustees, and monitoring and rectifying any governance deficiencies that may arise. By steadfastly adhering to these recommendations, pension schemes are poised to enhance their investment performance, ultimately reaping benefits for contributors and retirees. This proactive stance towards governance holds the potential to substantially bolster the long-term financial security and stability of occupational pension schemes in Kenya.

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WOMEN ENTREPRENEURIAL DEVELOPMENT: A CASE STUDY OF WOMEN SELF-HELP GROUPS ENTREPRENEURS

Vidya Kishan Alva¹, Dr.Kusum Thantry Dsa²

¹Research Scholar, Institute of Management & Commerce, Srinivas University, Mangalore-575001, India.

²Research Professor, Institute of Management & Commerce, Srinivas University, Mangalore-575001, India.

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ABSTRACT

Women entrepreneurs in SHGs play a vital role in driving economic and social change. Their endeavors not only enhance their own lives but also contribute significantly to the well-being of their families and communities. This research paper delves into the transformative journey of women entrepreneurs within self-help groups (SHGs) and examines their profound impact on community development and economic growth. Through a meticulous analysis of secondary sources, including scholarly articles, government publications, and authentic websites, the study investigates the status, motivations, challenges, and achievements of women entrepreneurs in SHGs. The findings underscore the pivotal role of SHGs in empowering women entrepreneurs by providing microloans, training programs, and access to markets. These initiatives enable women to establish businesses, invest in various sectors, and support their families. Motivated by financial independence, community development, and personal growth, women entrepreneurs within SHGs navigate challenges such as societal norms, limited access to technology, and legal barriers. By addressing the challenges they face and providing tailored support, societies can harness the full potential of women entrepreneurs, fostering inclusive economic development and social progress.

KEYWORDS: Women Entrepreneurs, Self-Help Groups (SHGs), Women's empowerment, Community development, Economic growth, Financial independence, Microloans, Training programs

1. INTRODUCTION

Entrepreneurship is crucial in industrial development, with women entrepreneurs gaining prominence globally. Women's entrepreneurial development within self-help groups is a transformative process that not only empowers individual women but also fosters community development and economic growth. Self-help groups (SHGs) provide a supportive environment where women can collaborate, learn, and access resources to establish and expand their businesses.

Women, noted for their perseverance, patience, and communication abilities, are vital for rural success. They are, however, frequently less educated, economically disadvantaged, and geographically limited. Entrepreneurship can help rural women by giving them opportunities for self-employment. The Self Help Group (SHG) concept is a driving force for rural women, and the SHG-Bank linkage program is the world's largest microfinance program.[1]

SHGs play a crucial role in women's entrepreneurial development, particularly in developing countries. They provide financial autonomy, support networks, and skills for women to start and grow their businesses, contributing significantly to the socio-economic structure of a community

This case study investigates the role of self-help groups (SHGs) in fostering women's entrepreneurial growth, highlighting their

transformative potential in promoting women's empowerment and economic development. It delves into motivational factors, performance metrics, and challenges faced by these women entrepreneurs, contributing to discussions on women's empowerment through entrepreneurial development

2. OBJECTIVE

- To assess the status of women entrepreneurs within self-help groups
- Analyze the performance of women self-help group entrepreneurs.
- To investigate the motivational factors driving women entrepreneurs to start their ventures
- Identifying the challenges experienced by women entrepreneurs in self-help groups

3. METHODOLOGY

The study made use of secondary sources to have comprehensive evidence-based research on women entrepreneurs development through self-help groups. Content analysis is based on observations from reputed journal articles, authentic websites, well-known books, popular reports, government publications, and articles from newspapers.

4. REVIEW OF LITERATURE

In Maja Schakenda Kaldahl's master thesis, completed in January 2016 at Copenhagen Business School, the focus is on



exploring the link between the entrepreneurial process and women's empowerment, particularly in the context of women's self-help groups in India. The thesis investigates the role of entrepreneurship in women's Self-Help Groups (SHGs) in India, highlighting the complex link between microfinance and women's empowerment. A qualitative field study in West Bengal found that women's aspirations drive their entrepreneurial journey, leading to economic, cultural, and social empowerment. Understanding these aspirations is crucial for poverty alleviation efforts.[2]

Preeti Sharma and Shashi Kanta Varma in their research article Women Empowerment through Entrepreneurial Activities of Self-Help Groups emphasized Self Help Groups and entrepreneurial activities play a pivotal role in empowering rural women, fostering economic independence, social recognition, and confidence. By addressing challenges and creating supportive environments, these initiatives can further enhance the empowerment of rural women, paving the way for sustainable development and gender equality in rural communities [3]

A Study on Women Entrepreneurship Development and Entrepreneurial Behaviour among Self-Help Groups in Kanyakumari District by D. Andrew Scott, Associate Professor at Alagappa Government Arts College, investigates the effectiveness of Self-Help Groups (SHGs) as a catalyst for developing entrepreneurship among women. The research uses descriptive and analytical methodologies and focuses on 150 women entrepreneurs associated with SHGs in Kanyakumari district. The findings highlight the importance of nurturing entrepreneurial talent, crucial for sustaining a competitive advantage in the global economy driven by innovation. Enhancing entrepreneurial traits can increase the pool of potential and active entrepreneurs, generating more employment opportunities and contributing to national wealth creation.[4]

5. WOMEN ENTREPRENEURIAL DEVELOPMENT AND WOMEN SELF-HELP GROUPS CONCEPT

WOMEN ENTREPRENEURIAL DEVELOPMENT

Entrepreneurship is crucial for economic success and human resource advancement. Women are increasingly interested in entrepreneurship due to its opportunities, such as being their boss, overcoming obstacles, and potentially earning more than family duties. Technological advancements have empowered women, enabling them to acquire the necessary qualifications and skills for business. Tailored programs are needed to bridge the gap in self-employment initiatives, significantly promoting women's empowerment through entrepreneurship.[5]

Women entrepreneurs in India had a tremendous impact on the country on a variety of levels. They have grown into self-sufficient, robust, and financially progressive individuals, serving as policymakers, policy implementers, managers, and leaders. Their insight and calculated risks have propelled their companies forward. Women entrepreneurs have found success at the collective level through Self-Help Groups (SHGs), which

have become effective vehicles for poverty eradication and upliftment. SHGs help rural women achieve financial independence by empowering them and cooperatively earning revenue. These organizations have made important contributions to the financial independence of rural women, positively impacting their lives. Women entrepreneurs are actively involved in nation-building endeavors as well as individual or group achievements.[6]

WOMEN SELF-HELP GROUPS

In developing nations like India, Self-Help Groups (SHGs) are essential for empowering women and advancing economic development. These micro businesses, which frequently rely on microloans from microfinance institutions (MFIs), increase purchasing power, create jobs, and bring in money. Rather than focusing solely on "mass production," the "masses approach" to manufacturing can solve macroeconomic issues like unemployment, poverty, and overpopulation. [7]

In addition to promoting economic and social transformation, Women's Self-Help Groups (SHGs) play a crucial role in women's holistic development. These groups unite women, pooling resources to achieve shared goals. Through teamwork, they foster a cooperative spirit, provide moral support, and provide essential cash support. SHGs also help break down barriers, build a strong sense of community, and instill confidence in women, fostering self-reliance, financial independence, and mutual empowerment.[8]

6. ABCD LISTING ANALYSIS

ABCD Analysis is a strategic tool used to assess various aspects of Women Entrepreneurial Development within Self-Help Groups (SHGs). This method categorizes factors into four groups: Advantages (A), Benefits (B), Constraints (C), and Disadvantages (D). Advantages (A) highlights the positive aspects, Benefits (B) focuses on the outcomes, Constraints (C) identifies challenges, Disadvantages (D): points out risks. This analysis provides a comprehensive overview, aiding in understanding the complexities and potentials of women's entrepreneurial initiatives within SHGs.

ABCD analysis of women entrepreneurial development through self-help groups are as follows:

A (Advantages)

- Self-help groups offer low-interest microloans and credit facilities to women, enabling them to start and grow enterprises, investing in inventory, equipment, and marketing, thereby boosting business growth and sustainability.
- Women undergo entrepreneurial training programs to enhance their skills in financial management, marketing, and product diversification, while also enhancing their confidence, decision-making, resource allocation, and market positioning.
- Self-help organizations offer female entrepreneurs networking opportunities, enabling them to connect with clients, suppliers, and business partners, thereby expanding their market reach and boosting sales and revenue.



- Self-help organizations offer mentorship programs that connect experienced entrepreneurs with newcomers, offering guidance on market trends, risk management, and innovation, enabling informed business decisions.
- Successful female entrepreneurs invest in community development projects, improving local quality of life, generating social impact, and gaining support for female-led firms.
- Through fairs, exhibitions, and online platforms, self-help organizations enhance the visibility and recognition of women entrepreneurs, fostering customer trust, brand recognition, and business success.
- Government policies and initiatives promote women's entrepreneurship through self-help groups, while financial incentives and subsidies drive economic growth.
- Female self-help group members serve as role models, encouraging others to pursue their entrepreneurial dreams, challenging gender norms, and advocating for social change and equitable opportunities.

B (Benefits)

- Entrepreneurial success empowers women to achieve financial independence by significantly contributing to home expenses, saving, and making crucial financial decisions for their families.
- Entrepreneurship fosters skill development, enabling self-help group members to adapt to market changes and consumer preferences, thereby increasing competitiveness and staying current with technical advancements and managerial practices.
- Successful female entrepreneurs in self-help groups gain societal recognition, challenge gender norms, and challenge prejudices, boosting their self-esteem, encouraging them to contribute more, and inspiring others.
- When female entrepreneurs of self-help groups are successful, the unemployment rate is reduced because they provide new job opportunities for people in the community, which in turn boosts economic growth by encouraging local businesses to invest and support their growth.
- Entrepreneurship fosters creativity among women self-help group members by generating innovative ideas, products, and services to meet market demands, attracting customers, and gaining a competitive edge.
- Self-help groups provide women with skill development courses to enhance their industry knowledge, boost confidence, facilitate market competition, and explore new business opportunities.

C (Constraints)

- Time management techniques are crucial for women entrepreneurs who often face burnout due to balancing business responsibilities with caregiving and domestic tasks.
- Limited technology access can hinder women entrepreneurs of self-help groups from expanding their

online reach, optimizing operations, and enhancing online marketing, e-commerce, and efficiency.

- Women entrepreneurs are frequently subjected to societal conventions and cultural restrictions that restrict their mobility, decision-making ability, and acceptance of non-traditional business roles.
- Due to their limited access to resources, need for collateral, and rigorous loan approval procedures, women entrepreneurs often encounter financial obstacles that prevent them from investing in larger-scale projects and growing their businesses.
- Market competition necessitates constant innovation and adaptability, which can be difficult for female entrepreneurs with minimal resources.
- Due to complicated business registration procedures, legal requirements, and a lack of knowledge about rules, women entrepreneurs confront legal and regulatory obstacles.
- The lack of mentorship options and professional networks for women entrepreneurs restricts their exposure to market trends, industry insights, and joint venture prospects.
- The absence of family support or social expectations that align with traditional gender roles can potentially hinder women's entrepreneurial endeavors.
- Work-life balance issues occur as women entrepreneurs devote significant time and effort to their firms.

D (Disadvantages)

- Entrepreneurship entails risks such as financial losses, market uncertainties, and business failures, especially for women entrepreneurs who may have difficulty accessing recovery resources.
- Limited financial resources can hinder female self-help entrepreneurs from investing in research, development, and innovation, which is crucial for market competitiveness and product or service launch.
- Market volatility can have a substantial impact on the sales and revenue of women-led firms, prompting the creation of adaptability strategies.
- The stress and extended work hours associated with entrepreneurship may potentially affect the physical and mental health of female entrepreneurs.
- Due to talent disparities, women-led enterprises may encounter difficulties in areas like digital marketing, technology adoption, and financial planning.
- The stigma and bias faced by women in business can lead to prejudice and hinder opportunities and support from stakeholders.

7. FINDINGS

- I. Self-help groups provide microloans and credit facilities to women entrepreneurs, enabling them to start businesses and invest in agriculture, handicrafts, and small-scale industries. They offer training programs, market access, and networking opportunities.



- II. Self-help groups empower women entrepreneurs by building confidence, improving communication, and encouraging leadership. They invest in community development projects, improving quality of life. Government initiatives support these groups through funding, training, and mentorship.
- III. Financial independence drives women entrepreneurs to start businesses, contributing to household expenses and securing futures. Entrepreneurship empowers women by granting economic control, fostering self-reliance, and boosting confidence. Women entrepreneurs also have a strong sense of community and social responsibility, contributing to local economies and improving quality of life.
- IV. Women entrepreneurs are passionate about their businesses, leveraging their skills in crafts, agriculture, or services to create unique products. They aspire to leave a lasting legacy for their families and become role models for other women, inspiring them to break free from traditional roles and embrace entrepreneurship as a fulfilling career.
- V. Entrepreneurship provides women with opportunities for personal growth and continuous learning, driving them to excel in their ventures. Recognition and social standing within their communities boost their confidence, while support from self-help groups, peers, mentors, and NGOs provides a strong network of encouragement, fostering their determination to overcome obstacles and succeed.
- VI. Balancing professional and family responsibilities, limited technology access, and socio-cultural issues hinder women entrepreneurs' growth and productivity in business.
- VII. Limited access to professional networks, mentorship, and education for women entrepreneurs can hinder their ability to learn, collaborate, and adapt to market trends, while societal norms often limit their decision-making power.
- VIII. Women entrepreneurs in self-help groups face financial constraints, lack of collateral, and legal and regulatory barriers, hindering business expansion and stagnation.

8. SUGGESTIONS

- ❖ Self-help group women entrepreneurs should have easier access to microloans and credit facilities at lower interest rates, and collaboration between financial institutions and governmental entities should be pursued for customized lending initiatives.
- ❖ Educational institutions and private organizations should collaborate to offer training programs for female self-help group entrepreneurs in financial management, marketing, product diversification, and technology adoption, along with specialized seminars.
- ❖ Women entrepreneurs should have access to networking events and online marketplaces to

showcase their products and establish connections with potential buyers, investors, and partners.

- ❖ A mentoring program should be implemented for female entrepreneurs, with successful entrepreneurs volunteering to share their skills and experiences.
- ❖ Women entrepreneurs should be empowered through leadership, negotiation, self-confidence courses, awareness campaigns, and training sessions to combat gender stereotypes and promote equitable opportunities in entrepreneurship.
- ❖ Digital business programs should include workshops for women entrepreneurs to acquire necessary tools and skills for marketing, online sales, and business management.
- ❖ Legislation should promote gender equality and safeguard women entrepreneurs' rights to property, inheritance, and public resources, while also offering legal advice and support services to help them navigate business challenges.
- ❖ Community awareness programs should promote women entrepreneurs' inclusion in business environments, while also fostering support networks for sharing experiences, mutual support, and project collaboration within communities.
- ❖ Feedback and data-driven insights should be used in the regular monitoring and assessment of programs that assist women entrepreneurs in self-help groups to make necessary service adjustments and continual improvement.

9. CONCLUSIONS

Women entrepreneurs in self-help organizations have made significant progress in economic, social, and communal areas. Their business initiatives benefit not only themselves but also their families and communities. These women drive economic development and social change by solving obstacles, developing skills, and providing a supportive environment.

In essence, the journey of women entrepreneurs within self-help groups (SHGs) symbolizes the transformative power of empowerment. Through access to microloans, targeted training, and supportive networks, these women navigate challenges and contribute significantly to economic growth and community development. Overcoming societal norms and balancing responsibilities, exemplify resilience and innovation. The collaborative efforts of SHGs not only foster financial independence but also inspire societal change. To sustain this momentum, continued investments in accessible financial resources, comprehensive training, and awareness campaigns are vital. Empowering women within SHGs is not merely a step toward economic progress but a leap toward a more inclusive and equitable future for all.

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CRYPTOCURRENCY BEHAVIOR AMONG RETAIL INVESTORS: A COMPREHENSIVE ANALYSIS

Shubham Sharma

Assistant Professor, Commerce, Government College Gharaunda

ABSTRACT

Cryptocurrencies have revolutionized the global financial landscape, attracting a wide range of investors, particularly retail investors. This research delves into the behavior of retail investors in cryptocurrency markets, exploring factors such as risk appetite, investment motivations, market psychology, and the impact of social media. Through a combination of literature review and data analysis, the study aims to provide insights into the patterns and trends that characterize retail investors' actions in the highly volatile and speculative cryptocurrency space.

KEYWORDS: Retail Investors, Behaviour, Crypto Currency

INTRODUCTION

The advent of Bitcoin in 2009 marked the beginning of the cryptocurrency era, which has since witnessed explosive growth and the emergence of thousands of alternative digital currencies. Retail investors, defined as individual, non-professional investors, have played a pivotal role in this expansion. The allure of high returns, coupled with the democratization of finance through decentralized platforms, has made cryptocurrencies an attractive investment class for many.

This study explores the behavior of retail investors in the cryptocurrency markets by examining their motivations, trading patterns, and the impact of external influences like media and social networks. Understanding these behaviors is crucial, as retail investors' actions often drive market volatility, influencing both short-term price movements and long-term trends in the cryptocurrency space.

LITERATURE REVIEW

1. Investment Motivations

Retail investors are often driven by the prospect of quick gains, which is a prominent theme in cryptocurrency investments. Studies suggest that the fear of missing out (FOMO) is a significant driver of retail participation in the market (Nguyen, 2021). Additionally, the decentralized nature of cryptocurrencies appeals to those disillusioned with traditional financial systems, further fueling retail investor interest (Corbet et al., 2019).

2. Risk Tolerance

Cryptocurrency markets are characterized by high volatility, and retail investors in this space often exhibit a high tolerance for risk. Research indicates that retail investors are more likely to engage in speculative trading and high-risk investment strategies in pursuit of significant returns (Pelster et al., 2019). This behavior contrasts with traditional markets, where retail investors tend to be more risk-averse.

3. Market Psychology

Market psychology plays a crucial role in shaping retail investor behavior in cryptocurrencies. Herd behavior is prevalent, with retail investors often following the crowd without fully understanding the market dynamics (Aalborg et al., 2019). The amplification of emotions like greed and fear is also more pronounced due to the rapid price swings and 24/7 nature of the cryptocurrency market.

4. The Role of Social Media and Influencers

Social media platforms like Twitter, Reddit, and YouTube significantly impact retail investor behavior in cryptocurrency markets. Influencers and community-driven content often sway investment decisions, with many retail investors relying on these platforms for information and market sentiment (Ante, 2021). The GameStop and Dogecoin phenomena highlighted how retail investors can collectively drive market trends through coordinated actions on social media.

METHODOLOGY

The study employs a mixed-methods approach, combining qualitative and quantitative data analysis to explore the behavior of retail investors in cryptocurrency markets. Survey data from retail investors, combined with secondary data on cryptocurrency trading patterns, will form the basis of the analysis. The study also includes a sentiment analysis of social media posts to assess the influence of online communities on retail investor behavior.

RESULTS

1. Survey Insights

Preliminary survey data suggests that retail investors are motivated primarily by the potential for high returns, with many viewing cryptocurrency investments as a way to achieve financial independence. However, a significant portion of respondents also indicated that their investment decisions are influenced by social media and the broader cryptocurrency community.



2. Trading Patterns

Analysis of trading data reveals that retail investors tend to engage in short-term trading strategies, often buying during market rallies and selling during downturns. This behavior contributes to the high volatility observed in cryptocurrency markets, particularly during periods of heightened speculation.

3. Social Media Influence

Sentiment analysis of social media posts highlights the strong correlation between online discussions and market movements. Retail investors appear highly susceptible to hype and FOMO generated by influential figures and viral content on platforms like Twitter and Reddit. This influence can lead to irrational decision-making, with investors sometimes acting on emotion rather than fundamental analysis.

DISCUSSION

The findings of this study underscore the unique characteristics of retail investor behavior in cryptocurrency markets. Retail investors are often driven by a combination of speculative motives, social influence, and a willingness to embrace high-risk strategies. This behavior sets them apart from institutional investors, who typically rely on more sophisticated analysis and risk management techniques.

The significant role of social media in shaping retail investor behavior also raises questions about market manipulation and the ethical responsibilities of influencers in the cryptocurrency space. Regulatory bodies may need to consider these dynamics when developing frameworks to protect retail investors in an increasingly decentralized and digital financial landscape.

CONCLUSION

Retail investors have become a driving force in the cryptocurrency markets, influencing price movements and

market trends through their collective actions. Their behavior is shaped by a unique set of motivations, risk tolerances, and external influences, particularly from social media. Understanding these dynamics is crucial for market participants, regulators, and policymakers as the cryptocurrency ecosystem continues to evolve.

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THE CHALLENGES OF INVESTIGATING AND PROSECUTING ONLINE SEXUAL ABUSE AND EXPLOITATION OF CHILDREN

Joshua Lomibao Manipud

Master of Science in Criminal Justice with Specialization in Criminology, University of Cordilleras.

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ABSTRACT

This research explores the challenges and strategies involved in investigating and prosecuting online sexual abuse and exploitation of children (OSAEC) in the Philippines, with a concentration on the Philippine National Police's Women and Children Protection Desk (PNP-WCPD). The Philippines currently ranks second globally for the prevalence of OSAEC, with factors such as poverty, technology accessibility, and cultural beliefs contributing to this issue. The study points out significant challenges for law enforcement, such as resource limitations, a lack of specialized training, and the covert nature of OSAEC activities. It emphasizes the involvement of family members in these crimes and the acceptance of such behavior within communities to be significant obstacles. The study utilized a qualitative descriptive method, conducting semi-structured interviews with PNP WCPD officers who have experience in handling OSAEC cases. The key findings indicate that proactive collaboration with other government agencies, extensive information gathering, and victim protection are critical measures in dealing with OSAEC challenges. Despite limited resources, PNP WCPD officers collaborate with agencies like the NBI, ISPs, and barangay officials to improve investigation and prosecution procedures. The study finds that an effective response to OSAEC cases requires a victim-centered, multi-agency strategy.

KEYWORDS: *Sexual Abuse, Exploitation, Children, Inter-agency Collaboration*

INTRODUCTION

The Philippines currently ranks second globally for the prevalence of online sexual abuse and exploitation of children (OSAEC), and emerged as the center of child sex abuse materials production in the world, with 80% of Filipino children vulnerable to online sexual abuse, some facilitated even by their own parents. As articulated in Article 19 of the United Nations' Convention of the Rights of Children (CRC), online sexual exploitation of children is an emerging issue that violates the right of children to be protected from abuse and exploitation (UN, 1990). This crime against children is considered an act of sexual violence comprising of sexual activity or attempted sexual activity imposed by an adult on a child, causing harm and hindering the development of the child's full potential as a human being (ASEAN, 2016).

With this, online sexual exploitation of children refers to a broad category of online sex offending that includes, but is not limited to, possession or distribution of previously produced CSEM, enticing children to "self-produce" new CSEM, and grooming children for later contact abuse. (R.A. 11930)

In connection, online child sexual exploitation perpetuates in the family due to the parents' distorted belief that it is acceptable and harmless since there is no physical touch and sexual intercourse involved (Kuhlmann & Auren, 2013; Ramiro et al., 2019; Terre des Hommes, 2013; Varella, 2017). Moreover, in view of the Filipino family values of *utang na loob*, some parents appeal to the child's sense of obligation to

help provide for the family in order to persuade, manipulate, and subject them to engage in such abuse (Hernandez et al., 2018; Kuhlmann & Auren, 2013; Terre des Hommes, 2013a; UNICEF, 2016).

In this report, the distorted belief of a parents, Filipino values, and the normalization of this form of abuse lead to the proliferation of OSAEC cases in the Philippines. From March 1 to May 24 in 2020, there were 279,166 reported incidents of OSAEC in the Philippines made through the NCMEC and as cited by the Office of Cybercrime of the Philippines. In terms of cyber tip line reports, some 3,188,793 were captured by NCMEC in 2021, higher by 138 percent than the 1,339,597 reports in 2020. Nearly half a million children in the Philippines were estimated to have been trafficked to produce new child sexual exploitation materials in 2022 (Situation of children.org, 2023).

Due to the increasing rate of OSAEC, the Philippines government signed into law the Republic Act No. 11930, "Anti-Online Sexual Abuse or Exploitation of Children (OSAEC) and Anti-Child Sexual Abuse or Exploitation Materials (CSAEM) Act." amending the 2009 Anti-Child Pornography Law to create stricter proscriptions on the production of CSEM.

While it is clear that law enforcement is becoming increasingly focused on OSAEC-related incidents, there remains a paucity of research on the challenges encountered, and the strategies that law enforcement officers employed in the investigation and



prosecution of OSAEC-related incidents. To address these issues, this study provides a general idea about the challenges and strategies in the investigation of OSAEC-related incidents.

Statement of the Problem

This study aims to identify the challenges of investigating and prosecuting online sexual abuse or exploitation of children (OSAEC),

Specifically, the researcher seek to answer the following questions:

1. What are the challenges encountered by the PNP officers in the investigation and prosecution of OSAEC-related incident?
2. What are the strategies employed by the PNP officer to address the challenges encountered in the investigation and prosecution of OSAEC-related incident?

METHODOLOGY

Research Design

The researcher utilized qualitative approach specifically descriptive- research employing semi-structured, face-to-face, in-depth interviews. According to Shields and Rangarjan (2013), a descriptive research design is used to describe the characteristics of a population or phenomenon being studied. It does not provide answers to the questions of how/when/why the characteristics arose. Rather, it answers the question of "what." Since the research was based primarily on the interview, this method was appropriate in obtaining information from the participants, especially to answer the objective of this research.

Population and Locale of the Study

The participants of this study were composed of PNP officers in the Women and Children Protection Desk, and they were selected based on purposive sampling. The criteria for choosing the participants are: (1) they must be an active member of the Philippine National Police and assigned to the Women and Children Protection Desk; (2) they must have experience in responding to and rescuing victims of OSAEC-related incidents; and (3) they must have experience in conducting investigations regarding OSAEC-related incidents. The fact that they are officers in PNP-WCPD, their knowledge and experience in investigating and prosecuting OSAEC-related incidents is important in this study. This study was conducted at the PNP Urdaneta City, Pangasinan. The researcher chose it as the locale of the study since the PNP, Urdaneta City received several reports regarding OSAEC-related incidents.

Data Gathering Tool.

The instrument that was used in this study to collect data from the participants was a semi-structured interview to determine the challenges encountered by the PNP officers in the investigation and prosecution of OSAEC-related incidents, and the strategies employed by the PNP officers to address the challenges encountered in the investigation and prosecution of OSAEC-related incidents. The interview guide was prepared and serve as a guide to gather factual information from the participants that were useful for this study.

Treatment of Data

With the use of the interview guide, questions and answers were recorded in narrative form. After data collection, all the opinions were analyzed and presented in thematic analysis. The collected data were analyzed, and codes were Identified, collated, and discussed. The recorded interview and transcribed texts were reviewed repeatedly to extract themes based on their similarities and differences. In addition, the study of Kwi-Soon and Bok-Sun (2009), states that the credibility were verified by making the participants review the interview descriptions to ensure accuracy. To achieve credibility, participants were contacted to seek verifications of the formulated meanings and clustered themes based on their narratives. Participants were manifest that what the researcher writes is what they want to convey.

RESULT AND DISCUSSION

What are the challenges encountered by the PNP officers in the investigation and prosecution of OSAEC-related incident?

Resource and Operational Limitations

This theme encompasses the challenges related to the lack of resources, supplies, and specialized training, as well as operational challenges that hinder effective investigation and resolution of OSAEC cases. This theme was elaborated below:

There is a lack of funds, resources, and trained personnel dedicated to identifying and apprehending suspects. The participants hold that:

Participant 1: "We lack funds and resources to really identify and catch the suspects. We also lack trained personnel to investigate such cases."

Participant 2: "*The Urdaneta PNP does not have the equipment to know the real culprit.*"

Participant 3: "There is really a lack of resources, so it is difficult to handle this kind of case."

In addition, OSAEC activities are carried out covertly, making detection and intervention more difficult. Participant 3 holds that:

"...it is difficult for the officers to identify or know immediately about such incidents because they are done it covertly."

It can be inferred that limited resources and a shortage of trained personnel can greatly diminish the effectiveness of investigations. This hampers the ability to identify and capture suspects, which can lead to lower success rates in solving cases and securing justice. As a result, the community's overall safety and security might be at risk if suspects are not caught promptly.

Challenges in Suspect and Victim Interaction

This theme explores the myriad issues that arise from the interactions and dynamics between victims and suspects, such as victim vulnerability, suspect anonymity, and complex victim-suspect relationships.

Suspects often use tools to conceal their identity and location. Participant 1 reported that:



“In my experience, the most common challenge for us is that we do not know the identity of the suspect. They use tools to hide their identity and their location.”

Moreover, in some instances, the victim's family or relatives may encourage the production of obscene videos. Some participants explain that:

Participant 2: “There are instances where the perpetrator has a relationship with the victim who is encouraged to send nude photos or videos...”

Participant 3: “And sometimes, it is actually the victim's family or relatives who encourage them to make obscene videos...”

In connection with that, some parents justify their actions by claiming that as long as they receive money and there is no physical contact, it is acceptable. Participant 3 holds that:

“The parent's reason is that as long as they have money, it is okay since there is no such thing as physical contact, so it seems that such an incident is tolerated.”

Furthermore, the victims involved are children, which adds a layer of sensitivity and complexity. Participant 3 reported that:

“Maybe a challenge in such cases is the victims because they are children. They are more sensitive than adults, so the approach should be careful.”

The researcher concludes that the involvement of family members and the covert nature of the incidents significantly complicate investigations of OSAEC. Ensuring the protection and psychological well-being of child victims requires specialized approaches and trained personnel in which PNP is significantly lacking. And the rationalization of the family of the victim can lead to a normalization of such behavior within certain communities, making it more difficult to combat and prevent.

What are the strategies employed by the PNP officer to address the challenges encountered in the investigation and prosecution of OSAEC-related incident?

Strategic Collaboration and Resource Optimization

This theme emphasizes the importance of building strong partnerships and increasing the capacity of the workforce. By working with various agencies and ensuring a trained and capable team, the efforts against OSAEC can be more effective and coordinated.

The involvement of barangay officials, NBI, ISPs, and other government agencies provides a comprehensive support system for identifying offenders. Participant 1 reported that:

“The method we are using to determine the identity of the offenders is to communicate with our barangay officials, the NBI, the internet service provider, and other government agencies.”

In support, barangay officials help in investigating the suspect's identity and background, leveraging their local knowledge and community connections. Some participants explain that:

Participant 2: “Through barangay officials, the culprit is being investigated to determine his true identity.”

Participant 3: “In the investigation, it is important to have the support of the LGU, DSWD, and barangay officials because they are the ones who can help the victim as well as hold the offenders accountable.”

In connection, limited funds and resources hinder the organization's ability to independently address OSAEC cases. Hence, the PNP WCPD's ability to make progress in OSAEC cases is contingent upon the support of other agencies. Participant 2 holds that:

“The only thing we can do, because we lack funds and resources, is to collaborate with government agencies that have enough equipment and trained personnel. Because if it's just us, the case won't really progress.”

The researcher inferred that each agency brings unique strengths to the case. Barangay officials contribute local knowledge, the NBI offers technical investigative expertise, ISPs provide technical data, and other government agencies bring additional resources and support. This multi-faceted approach is crucial for addressing the complex nature of OSAEC.

Comprehensive Intelligence and Victim Security

This theme focuses on thorough intelligence operations and the security of victims. It highlights the need for detailed intelligence gathering and protective measures to ensure that child victims are safe and supported during and after operations.

The victim in OSAEC is a child that requires more sensitive approach, and this complicates the investigation. One of the strategies employed by the PNP WCPD during response procedure is the involvement of LSWDO to ensure that the safety and well-being of the child are prioritized. Participant 3 declares that:

“...In responding, LSWDO and WCPD are with us to ensure the safety of the child.”

In support, DSWD offers counseling and other support services to victims, which are crucial for their psychological recovery and well-being. Also, DSWD personnel participate in rescue operations, ensuring that victims are safely removed from harmful environments and immediately provided with necessary care. Participant 1 explained that:

“DSWD helps us because they offer counseling and other support services to the victim. They are also with us in rescuing the victim.”

Moreover, PNP organization conducts intelligence gathering both online and in physical spaces. At the same time, barangay officials participate in the intelligence-gathering process, leveraging their local knowledge and community connections. Hence, the integrated intelligence approach enables the identification of perpetrators, even if they are family members of the victim. Participant 3 holds that:



“We have an intelligence gathering that is done either online or physically and we are also with the barangay officials, so when there is a case like that, even if the perpetrator is the victim's family, we can still identify it.”

On top of that, there is proactive investigation conducted by the Anti-cybercrime group and intelligence group. Anti-Cybercrime Group (ACG) is responsible for online monitoring and initial detection of suspicious activities. While the Intelligence Group (IG) engage in intelligence gathering and collaborates with other units to monitor online activities for OSAEC-related activities. Participant 1 reported that:

“In proactive investigations, usually the ones who do that are our anti-cybercrime groups here at the PNP and the Intelligence Group. They will conduct online or social media monitoring so that we can see suspicious activities. Intelligence gathering is also one strategy because we collaborate with service providers to get information on suspicious activities and the IP addresses of the perpetrators.”

The researcher concludes that, anonymity of suspect can be solved by taking initiatives to conduct an extensive intelligence gathering both online and physical spaces. Monitoring and intelligence gathering enable early identification of suspicious activities, allowing for preemptive action. The involvement of DSWs for victim's welfare is crucial considering the nature of the victim. Lastly, the involvement of specialized units like ACG and IG ensures that investigations are conducted with high levels of expertise in cybercrime.

CONCLUSION

Based on the data analyzed and the findings of the study, the researcher deduced the following conclusions:

1. The challenges faced by the PNP WCPD personnel add a disturbing layer of complexity to the investigation and prosecution of OSAEC and hinder their ability to effectively address these complex cases. This underscores the urgent need for enhanced resources, training, and multi-agency efforts to effectively address OSAEC cases.
2. The strategy employed by the PNP WCPD personnel compensates for the challenges they encountered during the investigation and prosecution of OSAEC cases. The combination of different agencies and sectors as a strategy significantly strengthens the PNP WCPD's ability to address the OSAEC effectively, despite the numerous challenges they face.

RECOMMENDATION

Based on the findings and conclusions mentioned above, the researcher suggests the following recommendations:

1. Establish a specialized training program for all PNP-WCPD and ACG personnel focused on the investigation and prosecution of OSAEC cases.
2. Formalize a multi-sectoral task force for OSAEC cases to streamline and strengthen inter-agency collaboration.

3. The Philippine Government should enhance budget allocations and resources specifically targeted toward addressing OSAEC cases.
4. One of the limitations of this study is the scope of the study; the data was gathered only on PNP WCPD; consequently, the researcher recommends to future researchers who want to replicate this study that they increase the scope of the study by gathering data also on the Office of Cybercrime, WPCPC, NBI, and other concerned agencies to have a more in-depth and scientific study.

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EXAMINING THE NELSON MANDELA RULES IN BALUNGAO DISTRICT JAIL

Joshua Lomibao Manipud

Master of Science in Criminal Justice with Specialization in Criminology, University of Cordilleras.

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ABSTRACT

This study explores the practices employed by jail personnel at Balungao District Jail in upholding the rights enshrined in the Mandela Rules, with a focus on managing inmates' dignity and fulfilling their basic needs. Prison overcrowding is one of the key contributing factors to poor prison conditions around the world. It is also arguably the biggest single problem facing prison systems and its consequences can at worst be life-threatening at best prevent prisons from fulfilling their proper function. The study utilized a qualitative descriptive method, conducting semi-structured interviews with Jail officers at Balungao District Jail. The findings highlight the jail's commitment to humane treatment, evidenced by the absence of solitary confinement and physical torture, and the consistent provision of food, healthcare, and other essentials. The study underscores the importance of maintaining manageable inmate populations to ensure effective rehabilitation and adherence to international human rights standards. This research offers insights into best practices in correctional management, emphasizing the balance between security and humane treatment, which contributes to a more stable and rehabilitative environment for inmates.

KEYWORDS: *Mandela Rules, Correctional Management, Human Rights in Jails, Inmate Rehabilitation, Overcrowding in Prisons*

INTRODUCTION

Jail is defined as a place for the confinement of people accused or convicted. Jail and prisons are as old as the society. Jail or prisons are created for various reasons, retribution, incapacitation, deterrence, and rehabilitation (Raphael Rowe Foundation, n.d.).

But as time goes by, the jail or prison faces a problem. Some of them are the insufficient budget, overcrowding of prisoners, and maltreatment, either physical or mental (Aprea, 2022). In prisons, because of the lack of liberty, detainees are particularly at risk of being victims of torture or ill-treatment (Albano, et.al, 2023). Violence and torture are an integral part of prison life. In extreme cases, violence can result in homicide. Detainees may be victims of violence inflicted by prison staff or fellow inmates (Albano, 2023). Some recorded violence is sexual violence, even if they have the same gender or the violator is an officer inside the jail (Sharma, 2023). According to Albano (2023) there are methods of maltreatment which can be classified as psychological and physical, of which physical methods inevitably lead to psychological consequences. Some maltreatment methods, such as sexual violence, almost unavoidably combine physical abuse with psychological abuse.

Prison overcrowding is one of the key contributing factors to poor prison conditions around the world. It is also arguably the biggest single problem facing prison systems and its consequences can at worst be life-threatening at best prevent prisons from fulfilling their proper function (Prison Overcrowding - Penal Reform International, 2021). During the pandemic, prison overcrowding has increased. Because of that, some problems are being encountered by the prisoners, some are increased violence, lack of adequate health care, limited

programming and educational opportunities, and reduced visitation (Initiative, 2020).

Bureau of Jail Management and Penology and the Bureau of Corrections are considered institutions for the Philippine correction system. But even if there are two agencies for the correction institution, they are still facing problems, like overcrowding and maltreatment of the prisoners (Bea, 2023).

According to the United Nations News (2023), the Philippines is ranked third for the most overcrowded prisons. The Philippines is considered to have the eleventh-highest prison population in the world (UN News, 2023). Moreover, the incarcerated are placed in life-altering circumstances when the prison cells are overcrowded, resulting in varied prison-crowding experiences. Overcrowding is also one of the main reasons why the prisoners encounter various diseases and most of the time, they don't have enough medical assistance given to them (MacDonald, 2018). During the pandemic, the UNODC reported that the BJMP and the BuCor are facing critical constraints, like jail and prison overcrowding, lack of facilities to address public health emergency concerns, and a limited number of medical and health professionals to cover the rising number of cases related to mental health deterioration, among others.

Given the challenges mentioned above, it is reasonable to argue that correctional institutions in the Philippines face limitations in fully adhering to the various aspects of the Mandela Rules. While it is clear that the Philippine Correctional System suffers from different issues and challenges, there is a paucity of research on the actual effects of overcrowding in the fulfillment of different aspects of the Mandela Rules, the sufficient



measures to prevent violence inside the jail and prison, and the successful practices of jails to fulfill the rights of the PDL as enshrined in the Mandela Rules. To address this gap, this research provides a clear picture on the effects of overcrowding, the measure to prevention violence, and practices to fulfill the different aspect of Mandela Rules.

Statement of the Problem

1. How does overcrowding affect the fulfillment of various aspects of the Mandela Rules?
2. What successful practices exist within Balungao Jail that are given to inmates based on Mandela Rules?

METHODOLOGY

Research Design.

This study employed a descriptive design through a semi-structured interview. A research study employing descriptive design integrates quantitative and qualitative research methods to gather data aimed at describing a phenomenon, situation, or population (Manjunathan, 2019). Common methods utilized in descriptive research encompass observations, surveys, and case studies. Unlike experimental designs, descriptive research does not involve the manipulation or control of variables by researchers (Kelkar, 2023). This approach is necessary to corroborate the gathered statistical data and understanding the trends surrounding it through key stakeholders.

Population and Locale of the Study.

This study was conducted in Balungao Jail as a focal point for the study. Balungao is an emerging community within which studies involving grassroots application of the Mandela Rules is best displayed. This makes it a relevant locale in studying the concerns the protocols contained in the study. On the matter of interview participants, the researchers employed purposive sampling, as defined by Hart and Rennison (2018), a nonprobability sampling technique where participants are selected based on specific characteristics related to the research focus. Given the study's emphasis on the Mandela Rules the participants were chosen based on their work as jail officers and their designations within the facility.

Data Gathering Tool

The instrument that was used in this study to collect data from the participants was a semi-structured interview to determine the effects of overcrowding in the fulfillment of Mandela Rules and successful practices to fulfill the rights of PDL in Mandela Rules. The interview guide was prepared and serve as a guide to gather factual information from the participants that were useful for this study.

Treatment of the Data

The study employed a thematic analysis. Thematic analysis was also used on the gathered interviews which systematically identifies, analyses, and reports patterns within a dataset, which included interview responses and relevant literature. Dawadi (2020) describes thematic analysis as a way to systematically organise and analyse complex data sets. The researcher familiarized the given recordings, texts, and notes to gain insight on the contents. After which, codes were assigned to each segment of the transcriptions. The next step was the theme

generation. Patterns were identified which allowed for themes to emerge. The establishment of the themes came after refining and reviewing. These themes were then analysed and summarized to address the problems of the study. In order to further validate the credibility of the study, the study utilized triangulation, as described by Olsen (2004), adapting various steps in order to explore the dimensions of a social phenomenon. Triangulation involved comparing and corroborating data from semi-structured interviews, content analysis, and related literature, validating findings across different empirical sources.

RESULT AND DISCUSSION

How does overcrowding affect the fulfillment of various aspects of the Mandela Rules?

This section outlines the negative effects of overcrowding on the fulfillment of PDL's rights under the Mandela Rules.

Strain on the Rights of the PDL in Overcrowded Jail Facilities.

This theme highlights the pervasive impact of overcrowding on inmates' rights specifically on their physical health and access to essential resources. The theme was elaborated below; select samples of participants' supporting statements, implications, and supporting studies are likewise described below.

Overcrowding significantly exacerbated the spread of diseases and limits access to healthcare services causing significant health-related problems and diminish the PDLs right to health. Participants holds that:

Participant 1: "As for health, many PDLs will have diseases because they are overcrowded in a dorm and will be infected with diseases."

Participant 2: "Their rights as PDL are also affected when overcrowded. Especially in health, because not everyone can be taken care of, and it's easier to get sick."

Participant 3: "Health is also affected; disease will be contagious. When overcrowded, it is difficult for us Jail officers to deliver healthcare services. This results in a delay in treatment, lack of medical attention that can be given and a higher chance of them contracting the disease."

Participant 4: "Their health is also affected because there are so many of them; they will really get infected."

In addition, the lack of resources due to overpopulation directly affects the ability to meet the basic needs of PDL and overcrowding compromises prisoners' ability to maintain personal hygiene, which further deteriorates their living conditions and overall well-being. Some participants explain that:

Participant 1: "Overcrowding affects a jail facility because when overcrowded, you cannot provide the activities or services properly because the resources will be lacking with the amount of PDL."

Participant 2: "First of all, their comfort is sacrificed, but of course, they are PDL, so they shouldn't be comfortable. But of course, it's hard to live when it's overcrowded; you don't know how to fit yourself. I had experience during my training there in a small jail



facility with a high population. As it's crowded inside, they don't have many activities because they don't have a place to do them. Then, when sleeping, make it difficult for them to find their place to sleep. And their hygiene: when it's crowded, not everyone can take a bath. They don't bathe there every day; they just have a schedule..."

The data emphasizes the serious consequences of overcrowding for the rights and well-being of persons deprived of liberty (PDL). Overcrowding aggravates disease transmission, severely restricting inmates' access to healthcare services, which is a fundamental right. Jail facilities' incapacity to offer proper medical treatment due to the high number of convicts not only violates their right to health but at the same time perpetuates a cycle of disease and neglect within the jail facility. As participants highlighted, excessive population density causes prompt spread of illness and treatment delays, exacerbating the health crisis in these overcrowded areas. This circumstance violates the fundamental concept of humane treatment as established in international standards, such as the Mandela Rules, which emphasize the importance of maintaining prisoners' health and dignity.

Undermines Ability: Due to Risks to One's Security, Safety, and Mental Health

This theme addresses the psychological, safety, and security challenges posed by overcrowded environments:

Overcrowding has a psychological impact on inmates, such as increased stress and irritation, leading to a volatile environment, and raising the risk of conflict. Two of the participants pointed that:

Participant 3: "It's hard, it's hot, when it's hot, they're also hot-headed so they're more easily irritated. So, it is also difficult for us to maintain security."

Participant 4: "And when it's overcrowded, the heads of the PDLs will also be heated; the heat of the weather and their feelings will mix. And in such a situation, you think about your safety."

Hence, with overcrowding, it becomes increasingly challenging to ensure the safety and security of both prisoners and staff, as the facility struggles to manage the increased population.

It can also be interpreted that overcrowding may also be viewed as increasing the strain on workers, making it impossible to maintain order and provide proper supervision, compromising overall safety. At the same time, overcrowded circumstances impair inmates' rights, especially their dignity and fair treatment, resulting in breaches of the standards set for humane treatment.

In contrast, all of the participants stressed that, under their present designation, the Balungao District Jail (the locale of the study) did not suffer overcrowding. They provide an overview regarding the current situation of the Balungao District Jail, which can give a clear picture of the situation of a jail facility when it is not overcrowded. Hence, this can offer a basis for comparing the experience of jail personnel from overcrowded

jails to non-overcrowded jails. This was further elaborated together with participants selected statements.

The Balungao District Jail benefits from a manageable inmate population, which positively influences the overall environment and the effectiveness of management. This manageable population contributes to a more stable environment where inmates are described as "kind" and "manageable. Participants explained that:

Participant 1: "Balungao District Jail is fine. Right now, there is a jail population of 200 to 600. We have male and female PDLs now. They are kind; they are manageable. In Balungao District Jail, it is not an overcrowded jail because, unlike in Manila, where it is really overcrowded."

Participant 2: "So far, it's okay. The conditions of the PDLs are okay; they are not overcrowded, they can eat three times a day, and they are not bored because our activities are continuous."

Moreover, health monitoring at the Balungao District Jail is a key focus, with ongoing care for inmates with high blood pressure, diabetes, and tuberculosis. The jail coordinates with partner agencies such as LGUs, RHUs, and hospitals for health services, including vaccination programs. Participant 1 holds that:

"We have health monitoring; since I'm a nurse, we monitor those with high blood pressure, diabetes, or TB. We coordinate with our partner agencies, like LGUs, RHUs, and hospitals; they go there or here when they conduct vaccines. So far, high blood pressure is the most common issue here in terms of health. He also has diabetes and TB, but the medication is on-going."

In addition, the jail offers various programs and activities aimed at rehabilitation and keeping inmates engaged. Although the facility is not yet fully equipped for the KKDK (Katatagan Kontra Droga sa Komunidad) program, there are other initiatives like Bible studies, skills enhancement, and sports activities. Two of the participants stressed that:

Participant 1: "Those who are imprisoned here are being rehabilitated because there are programs that we follow. But the rehabilitation is happening outside, since there are rehab centers outside, but BJMP also has programs like KKDK. But our facility here at the Balungao District Jail is not yet a KKDK facility; our two personnel still need to undergo training for the KKDK program of the BJMP. Because there, the jail itself is like a rehabilitation center."

Participant 2: "From time to time, there are people who come here like born-again. They conducted a Bible study together or sometimes offered a feeding program. The Iglesia ni Kristo has a vow every day, or sometimes an online mass that's only for interfaith. We also have skills enhancement; we teach them to cook some kind of business food. They also play sports; sometimes they play games; sometimes they play with the personnel; or sometimes they do OJT."



The researchers concludes that the data implies that overcrowding directly undermines the ability to maintain humane conditions and uphold the rights of inmates. In facilities like Balungao District Jail, where overcrowding is not an issue, inmates receive more personalized care, with ongoing health monitoring and access to various rehabilitation programs. This corroborates with the statements of participants regarding their previous experience in overcrowded jails, which suggests that overcrowding in jails leads to significant negative outcomes, including deteriorating mental health, increased risk of conflict, and violations of basic human rights. The situation at Balungao District Jail highlights the importance of maintaining manageable inmate populations to ensure that their dignity, health, and rights are preserved. .

Based on the Mandela Rules, what are the successful practices that exist within Balungao District Jail that you are giving to the PDL?

This section underscores the best practices perform by the participants to fulfill the rights of the PDL under Mandela rules.

Upholding Human Dignity in Correctional Practices

This theme focuses on the commitment to treating inmates with respect and ensuring that their dignity as human beings is preserved.

The participants emphasize that the Balungao District Jail avoids practices such as solitary confinement and physical torture, which are often depicted in media and violate human rights. Instead, the Balungao District Jail is committed to a humane approach, where inmates are treated well, reflecting a strong alignment with international standards, such as the Mandela Rules. Participants reported that:

Participant 1: "Because here, as seen in the movie, we are not brutal towards them. We always ensure that our treatment of them is humane. We treated them well, there was no solitary confinement, no physical torture that was heard or seen, nothing. We respect their dignity as a person. They are still human."

Participant 2: "...Human dignity is respected, we are not here like you see in a movie where there is torture, there is nothing like that here."

Participant 3: "The right to health is fulfilled, we don't have solitary confinement, and we don't torture anyone. So right after entering, I said the treatment was friendly, the moment they were admitted here, their dignity as a person was immediately respected."

Participant 4: "Their dignity is respected. Health is really monitored; there is no solitary confinement; all rights are fulfilled."

The researchers concludes that the commitment to upholding human dignity, as demonstrated by the rejection of practices like solitary confinement and physical torture, aligns closely with the Mandela Rules and international human rights standards. This practice underscores the importance of treating inmates as human beings deserving of respect and humane treatment, regardless of their incarcerated status. This implication supports the findings in SOP 1 that when inmates are treated with dignity, there is a positive impact on their

behavior, psychological well-being, and potential for rehabilitation. This alignment with human rights standards can also enhance the Balungao District Jails's reputation and contribute to better outcomes for inmates, including lower recidivism rates.

Consistent Fulfillment of Inmates' Rights and Basic Needs

This theme highlights the participants' dedication to consistently meeting the basic needs and rights of inmates, particularly in terms of food, sleep, and healthcare.

Participants stress that the inmates receive adequate nutrition, proper sleeping conditions, and active health monitoring by jail nurses. This consistent fulfillment of basic needs as the best practices was aligned in the Mandela Rules, ensuring that inmates' rights are not neglected and that they are treated humanely and with care. Two of the participants holds that:

Participant 2: "The most fulfilling of their rights here is that we do not neglect their food or basic needs. We are consistent in fulfilling all their rights, maybe that is our best practice. Because they can sleep well, they eat three times a day. In terms of health, our jail nurses are very active. When someone gets sick, they will go to the clinic and be given medicine, as long as it is not medicine that requires a prescription."

Participant 4: "Their rights are given properly under Mandela's rules. Continuous implementation of all their rights may be our best practice. When it's their right, they will really give everything; it can't be denied."

The data highlights the importance of consistently meeting the basic needs of inmates, such as food, sleep, and healthcare, as part of the facility's best practices. The findings of this research have shown that when inmates' basic needs are reliably met, it leads to a more stable and peaceful environment, reducing the likelihood of unrest and promoting better health outcomes. The active involvement of jail nurses in monitoring and addressing health issues further outlines the critical role of healthcare in maintaining the well-being of inmates. The Balungao District Jail's adherence to the Mandela Rules by ensuring that all rights are fulfilled without neglect reflects an exemplary approach to correctional management in the Philippines. This consistency not only improves the quality of life for inmates but also supports the broader goals of rehabilitation and reintegration into society.

CONCLUSION

Based on the data analyzed and the findings of the study, the researchers deduced the following conclusions:

1. The disparity between overcrowded jails and the Balungao District Jail, where overcrowding is not a problem, emphasizes the need to keep PDLs numbers acceptable. In less congested jails, PDLs receive more specialized treatment, regular health monitoring, and access to rehabilitation programs, all of which contribute to a more stable and humane environment. This comparison indicates that overcrowding not only breaches international standards for the treatment of inmates but also creates an environment in which the



fulfillment of basic human rights becomes unreachable.

- The practices employed by the Balungao District Jail demonstrate a successful model of correctional management that respects the rights and dignity of inmates while maintaining security and order. These practices not only align with the Mandela Rules but also contribute to better outcomes for inmates, including improved health, reduced recidivism, and a more positive correctional environment.

RECOMMENDATION

Based on the findings and conclusions mentioned above, the researcher suggests the following recommendations:

- The government and correctional administration should strengthen the use of non-institutional programs to reduce the strain on correctional facilities. Also, overcrowding is a result in a large number of people committing crime. Hence, it is recommended that law enforcement agencies prioritize their crime prevention approach.
- The practices employed by the Balungao District Jail should be documented and shared as a model of best practices for correctional management. Other facilities can learn from these examples to improve their own management strategies, particularly in maintaining a balance between security and humane treatment.
- One of the limitations of this study is the scope of the study; the data was gathered only on BJMP personnel; consequently, the researchers recommends to future researchers who want to replicate this study to gather also a data coming from the PDL, to have further comparison and corroboration and a more in-depth and scientific study

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EXPLORING THE LINK BETWEEN ENTREPRENEURIAL ABILITIES TO CAREER READINESS AND EMPLOYABILITY SKILLS OF STUDENTS

Anjelyn Del Rosario Villareal

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study explores the link between entrepreneurial abilities, career readiness, and employability skills among students. It aims to know the status of students' entrepreneurial abilities; career readiness of students to vocational competence and employability skills. The relationship between students' entrepreneurial abilities and career readiness to vocational competence and employability skills were interpreted.

The quantitative and correlational research design was used. The respondents were composed of two hundred four Grade 12 students from selected private schools in San Pablo City, Laguna. The research instrument used was a close-ended questionnaire; the data was gathered through a survey.

The findings showed the students have the ability to think critically and creatively when problems occur; show a willingness to adapt change in their community; and observe conciseness and good interaction to the people around them. The career readiness of students to vocational competence shows that they have the ability to learn new things; analyze data about different situations; and they have capability to provide options that leads them to a better decision. On their career readiness of students to employability skills, their being good leaders lead them to becoming successful individuals, showing good teamwork provides successful tasks; and their ability of being reliable showed that it is one of the most important characteristics an individual must have.

The relationship between students' entrepreneurial abilities and career readiness as to vocational competence was significant, and this rejected the hypothesis as it implies that students demonstrate proactive problem-solving skills, critical thinking, and innovative application of knowledge. While the relationship between students' entrepreneurial abilities and career readiness as to employability skills was significant, this also rejected the hypothesis as it implies that students adapt to change, explore ideas, prioritize tasks, respond positively to feedback, and value ongoing learning.

This study recommends that when it comes to adaptability, students must know how to prioritize changes and positively deal with constructive criticism. Also, in communicating, practice expressing the ideas clearly to make others understand them well; however, learn to make and generate ideas or alternative solutions to a certain challenge.

KEYWORDS: *entrepreneurial abilities; career readiness; employability skills*

1. INTRODUCTION

The traditional path to career success in today's rapidly changing global job market has shifted away from traditional employment models and toward a more dynamic and entrepreneurial landscape. Students and young professionals face a growing need to learn diverse skills and competencies beyond academic knowledge and technical expertise as industries become more competitive and turbulent. This paradigm shift has emphasized the crucial role of entrepreneurial abilities in preparing students to face the challenges of a rapidly changing world.

Entrepreneurship education, which has historically been linked with the start-up and management of firms, is increasingly acknowledged for its broader relevance in educating students for various professional paths. Learning about entrepreneurship is tremendously important in this process. I organize visits, seminars, and case studies on higher education courses to immerse students in real situations.

Under this is the entrepreneurial ability, which refers to the readiness and ability to start and organize an individual as an

early intervention of entrepreneurship skills. These abilities help an individual get more ready to face real-world situations.

As an article stated, both students and professionals require solid entrepreneurial abilities. Nowadays, learning entrepreneurial skills is a need rather than an exception. Without entrepreneurial abilities, it is tough to research the best and stay ahead of the competition. Learning entrepreneurial skills in school can help kids achieve better job success (Borkala, L. K. M, 2022).

Entrepreneurial abilities like problem-solving, creativity, adaptability, and effective communication are useful for aspiring entrepreneurs and professionals pursuing traditional careers. These abilities are set as their starting point and stepping stones to becoming a successful individual in whatever career path they choose.

Supported by a study that suggests that entrepreneurial ability should be regarded as an important starting point for entrepreneurial success, that the career development system needs to be improved to create more opportunities for on-the-job entrepreneurship, and that the government should



implement differentiated and precise entrepreneurial support policies to encourage (Hu, W. et al., 2022).

This research investigates the link between entrepreneurial abilities and career readiness and students' employability skills. Understanding the role of entrepreneurial abilities in molding students' employment preparation is critical in an era marked by technological change, economic instability, and a shifting labor market environment.

1.1 Statement of the Problem

Specifically, the researcher pursued to answer the following questions:

1. What is the status of students' entrepreneurial abilities in terms of:
 - 1.1 problem-solving;
 - 1.2 creativity;
 - 1.3 adaptability; and
 - 1.4 Effective communication?
2. What is the status of career readiness of students to vocational competence in terms of:
 - 2.1 practical skills;
 - 2.2 occupational knowledge; and
 - 2.3 decision-making?
3. What is the status of career readiness of students to employability skills in terms of:
 - 3.1 leadership;
 - 3.2 teamwork; and
 - 3.3 reliability?
4. Is there a significant relationship between students' entrepreneurial abilities and career readiness as to vocational competence?
5. Is there a significant relationship between students' entrepreneurial abilities and career readiness as to employability skills?

2. METHODOLOGY

The study conducted was a quantitative and correlational research. Quantitative research is a classification of research that is designed to look into patterns, causal relationships, and predictions (Bhandari, 2021) by collecting, quantifying, and statistically analyzing data. It explains a certain phenomenon through the exploration of the data's numeric form which can be obtained from different strategies of inquiry such as

structured observations, experiments, and questionnaires (Coghlan & Brydon-Miller, 2014).

3. RESULTS AND DISCUSSION

This chapter presents the results of the statistical analysis, and interpretation of the data collected. This chapter includes the result of status of students entrepreneurial abilities in terms of problem solving, creativity, adaptability and effective communication. Also, this shows career readiness of students in terms of vocational competence and employability skills and the result of the significant relationship between students entrepreneurial abilities and career readiness as to vocational competence and employability skills.

Status of Students Entrepreneurial Abilities

This chapter presents the statistical analysis results and interpretation of the data collected. This chapter includes the result of students' entrepreneurial abilities in problem-solving, creativity, adaptability, and effective communication. Also, this shows students' career readiness in terms of vocational competence and employability skills and the result of the significant relationship between students' entrepreneurial abilities and career readiness as to vocational competence and employability skills.

Status of Students' Entrepreneurial Abilities

The status of students' entrepreneurial abilities in terms of problem-solving, creativity, adaptability, and effective communication was treated statistically using mean and standard deviation.

Table 1 shows the statements, mean, standard deviation, and remarks on entrepreneurial abilities in problem-solving. The students are perpetually contemplating solutions to the problem at hand. The mean (M = 3.66, SD = 0.50) shows a very high level of student's entrepreneurial abilities in terms of problem-solving. Also, students apply the knowledge they have acquired to address fresh challenges. While the mean is slightly lower (M = 3.64), it still indicates a very high level of student's entrepreneurial abilities in problem-solving.

The status of student's entrepreneurial abilities in terms of problem solving attained a weighted mean score of 3.54 and a standard deviation of 0.54 and was verbally interpreted as *very high* among the respondents.

Table 1 Status of Students Entrepreneurial Abilities in Terms of Problem Solving

<i>I...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...try to think of multiple solutions, when challenging problem arises.</i>	3.53	0.54	Strongly Agree
<i>...am able to identify problems that keep from my goals.</i>	3.35	0.57	Strongly Agree
<i>...always think of ways to solve the problem.</i>	3.66	0.50	Strongly Agree
<i>...identify what needs to be known about a problem or design task.</i>	3.50	0.57	Strongly Agree
<i>...use knowledge learned to solve new problems.</i>	3.64	0.53	Strongly Agree



Weighted Mean	3.54
SD	0.54
Verbal Interpretation	Very high

This means that, students demonstrate their ability to think critically and creatively when faced with difficult problems, striving to multiple solutions. Students use different ways they can have to resolve problems they are encountering. They

adeptly identify obstacles hindering their progress and persistently seek resolutions. They determine the essential information required for addressing challenges.

Table 2 Status of Students Entrepreneurial Abilities in Terms of Creativity

I...	MEAN	SD	REMARKS
...apply new ideas in practical way to improve the way things are done.	3.53	0.59	Strongly Agree
...learn and discover myself, led by my curiosity.	3.58	0.53	Strongly Agree
...think of an alternative idea if the original idea is not applicable.	3.48	0.60	Strongly Agree
...stimulate new ways of looking at things.	3.37	0.64	Strongly Agree
...use idea generating techniques such as brainstorming to develop several original ideas.	3.49	0.57	Strongly Agree
Weighted Mean	3.49		
SD	0.59		
Verbal Interpretation	Very high		

Table 2 shows the status of student's entrepreneurial abilities in terms of creativity. Also shows the statements, mean, standard deviation and remarks.

The mean (M = 3.58, SD = 0.53) shows a very high level of student's entrepreneurial abilities in terms of creativity. Through students' curiosity, they were able to learn and discover creative ideas. While the mean is slightly lower (M = 3.53, SD = 0.59), it still indicates very high level of student's entrepreneurial abilities in terms of creativity by the student's which implies that students used new ideas in practical way.

The status of student's entrepreneurial abilities in terms of creativity attained a weighted mean score of 3.49 and a standard deviation of 0.59 and was verbally interpreted as *very high* among the respondents.

This means that, students demonstrate their creativity in different ways that they may apply in their future career. This

has the tendency to generate, recognize ideas, alternatives or possibilities that they may be useful in solving problems, communicating with others and entertaining ourselves and others.

Table 3 shows the status of student's entrepreneurial abilities in terms of adaptability. This also shows the statements, mean, standard deviation and remarks.

The mean (M = 3.36, SD = 0.70) shows a very high level of student's entrepreneurial abilities in terms of adaptability. Students tend to do things that will force them to learn new things. While the lower mean (M = 3.08, SD = 0.58), still indicates that students can still do things even when changes and priorities occur.

The status of student's entrepreneurial abilities in terms of adaptability attained a weighted mean score of 3.25 and a standard deviation of 0.64 and was verbally interpreted as *very high* among the respondents.

Table 3 Status of Students Entrepreneurial Abilities in Terms of Adaptability

I...	MEAN	SD	REMARKS
...can work effectively in a climate of ambiguity and changing priorities.	3.08	0.58	Agree
...can deal positively with praise, setbacks and criticism.	3.15	0.63	Agree
...can understand, negotiate and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments.	3.31	0.65	Strongly Agree
...prefer to do things that force me to learn something new.	3.36	0.70	Strongly Agree
...can overcome setbacks to take on an important challenge.	3.34	0.65	Strongly Agree



Weighted Mean	3.25
SD	0.64
Verbal Interpretation	Very high

This means that students know how to cope up with different situation they may encounter in their career.

Table 4 shows the status of student's entrepreneurial abilities in terms of effective communication. This also shows the statements, mean, standard deviation and remarks.

Table 4 Status of Students Entrepreneurial Abilities in Terms of Effective Communication

I...	MEAN	SD	REMARKS
...can express my own ideas clearly.	3.15	0.67	Agree
...ask questions to deepen my understanding.	3.51	0.59	Strongly Agree
...speak carefully to avoid any misunderstandings which may arise from their local accent.	3.49	0.62	Strongly Agree
...talk at a speed which enables everyone to understand what I am saying.	3.14	0.75	Agree
...am sensitive when communicating with people from different cultures.	3.18	0.81	Agree
Weighted Mean	3.29		
SD	0.69		
Verbal Interpretation	Very high		

In order to deepen the students understanding, they try to ask questions. This got the highest mean (M = 3.51, SD = 0.59) in the level of student's entrepreneurial abilities in terms of effective communication. Through effective communication, the students expand their knowledge about one particular thing. While the mean is slightly lower (M = 3.49, SD = 0.62), it still indicates very high level of student's entrepreneurial abilities in terms of effective communication by the student's.

The status of student's entrepreneurial abilities in terms of effective communication got a weighted mean score of 3.29 and a standard deviation of 0.69 and was verbally interpreted as *very high* among the respondents.

This shows that effective communication is important when interacting with others in a professional environment. Learning the effective communication may be bring one's individual in developing certain skills active listening. By this, this can benefit the professional career and learn to clearly and concisely communicate.

Status of Career Readiness of Students

The status of career readiness of grade 12 senior high school students to vocational competence in terms of practical skills, occupational knowledge and decision-making was treated statistically using the mean and standard deviation.

Table 5 shows the status of student's career readiness to vocational competence in terms of practical skills.

In resolving conflict, the needs of everyone involved is needs to be addressed. The mean (M = 3.43, SD = 0.59) shows a very high level of student's career readiness to vocational competence in terms of practical skills. This also means that there practical ways that can be used to resolve an issue, it only needs to have a good plan to make it. While the mean is slightly lower (M = 3.39, SD = 0.67), it still indicates a very high level of student's career readiness to vocational competence in terms of practical skills. It means that when problem occurs, having systematic plan and thorough analyzing of data or information is needed to resolve the conflict.

Table 5 Status of Career Readiness of Students to Vocational Competence in Terms of Practical Skills

I...	MEAN	SD	REMARKS
...understand the needs of everyone involved, when resolving a conflict.	3.43	0.59	Strongly Agree
...transform ideas in a way that become applicable in practice.	3.31	0.61	Strongly Agree
...analyze all the facts and put them in systematic order, when facing a problem.	3.39	0.67	Strongly Agree
...prepare strategic plan when problem arises.	3.26	0.68	Strongly Agree
...apply structured plan in different areas of my chosen field.	3.27	0.70	Strongly Agree



Weighted Mean	3.33
SD	0.65
Verbal Interpretation	Very high

The status of student's career readiness to vocational competence in terms of practical skills garnered a weighted mean score of 3.33, a standard deviation of 0.65 and was verbally interpreted as *very high* among the respondents.

This shows that practical skills allow students to quickly learn adaptations needed for daily challenges and scenarios and allows them to get a better understanding of their chosen career. Preparing and setting different plan that may be used to improve an individual practical skills. Also, being practical, this can help an individual to learn new things.

Table 6 Status of Career Readiness of Students to Vocational Competence in Terms of Occupational Knowledge

I...	MEAN	SD	REMARKS
...know how to differentiate between fact and assumption.	3.32	0.61	Strongly Agree
...have the ability to evaluate the opinions and knowledge of others.	3.42	0.64	Strongly Agree
...have the ability to analyze the situation, identify the factors and find information about the problem.	3.49	0.70	Strongly Agree
...understand the key concepts and practices related to chosen field.	3.29	0.58	Strongly Agree
...am proficient in using specialized tools and software relevant to the chosen field.	3.16	0.65	Agree
Weighted Mean	3.34		
SD	0.64		
Verbal Interpretation	Very high		

Table 6 shows the status of student's career readiness to vocational competence in terms of occupational knowledge. The statements, mean, and standard deviation and remarks are also shown here.

evaluate one's opinion and knowledge.

The mean (M = 3.49, SD = 0.70) shows a very high level of student's career readiness to vocational competence in terms of occupational knowledge. This indicates that students have the ability to identify and find data or information about a specific problem. While the mean is slightly lower (M = 3.42, SD = 0.64), and still shows a very high level of student's career readiness to vocational competence in terms of occupational knowledge. This indicates that students have the ability to

The status of student's career readiness to vocational competence in terms of occupational knowledge garnered a weighted mean score of 3.34, a standard deviation of 0.64 and was verbally interpreted as *very high* among the respondents.

This means that students have the ability to analyze the different situations they encounter, also they do identify the information about the certain situation. As they gather information, students do evaluation of the opinions given by the other people around them. Through that, they have the knowledge of which is right or not.

Table 7 Status of Career Readiness of Students to Vocational Competence in Terms of Decision-Making

I...	MEAN	SD	REMARKS
...generate a SWOT analysis in decision making.	3.19	0.71	Agree
...am comfortable in taking risks when trying to solve a problem	3.24	0.75	Strongly Agree
...use intuition or "gut feeling" in making decision.	3.22	0.68	Strongly Agree
...present achievable options as part of my decision-making.	3.40	0.60	Strongly Agree
...quantify the probability of success in decision-making.	3.39	0.67	Strongly Agree
Weighted Mean	3.29		
SD	0.67		
Verbal Interpretation	Very high		



The mean ($M = 3.40$, $SD = 0.60$) shows a very high level of student's career readiness to vocational competence in terms of decision-making. This suggests that providing options when making decision help students to practice their decision-making ability that will lead them to a better decision. While the mean is slightly lower ($M = 3.39$, $SD = 0.67$), indicates a very high level of student's career readiness to vocational competence in terms of decision-making. This implies that decision-making helps students to have a higher chance of being successful.

The status of student's career readiness to vocational competence in terms of decision-making attained a weighted mean score of 3.29, a standard deviation of 0.67 and was

Table 8 Status of Career Readiness of Students to Employability Skills in Terms of Leadership

I...	MEAN	SD	REMARKS
...often use the technique of brainstorming to come up with new ideas.	3.43	0.64	Strongly Agree
...am persuasive when handling questions and/or objections from others.	3.24	0.65	Strongly Agree
...have high sense of responsibility in the group.	3.33	0.73	Strongly Agree
...demonstrate positive and high expectation.	3.30	0.68	Strongly Agree
...model the values and behaviours that support my fellow students at all levels.	3.37	0.64	Strongly Agree
Weighted Mean	3.33		
SD	0.67		
Verbal Interpretation	Very high		

Table 8 shows the status of student's career readiness to employability skills in terms of leadership. This shows the statements, mean, standard deviation and remarks.

Students use different strategies to make ideas. The mean ($M = 3.43$, $SD = 0.64$) shows a very high level of student's career readiness to employability skills in terms of leadership. This means that leaders may use brainstorming as one of the strategies in creating new ideas. As leaders get different ideas from each member, it leads them to a better decision. The more ideas a leader gets from his/her members, the better decision may be. While the mean is slightly lower ($M = 3.37$, $SD = 0.64$), indicates a very high level of student's career readiness to employability skills in terms of leadership. This implies that being a leader you should set as a role model in your members not just by having a good personality but also in values and

verbally interpreted as *very high* among the respondents.

This means that students provide options as they make decision, as such, they generate ideas that they can apply to solve a problem. Providing options gives a better decision and helps them to achieve the goal they have.

Status of Career Readiness of Students

The status of career readiness of students to employability skills in terms of leadership, teamwork and reliability was treated statistically using mean and standard deviation.

behaviour you must have.

The status of student's career readiness to employability skills in terms of leadership attained a weighted mean score of 3.33, a standard deviation of 0.67 and was verbally interpreted as *very high* among the respondents.

As students interact with their peers or even work in teams, this shows they need leadership skills to effectively complete their task, engage and build rapport with the team. They become independent in different aspects. By assuming responsibility, this demonstrates a willingness to help others, to listen empathetically and to make sound decisions.

Table 9 shows the status of student's career readiness to employability skills in terms of teamwork. This shows the statements, mean, standard deviation and remarks.

Table 9 Status of Career Readiness of Students to Employability Skills in Terms of Teamwork

I...	MEAN	SD	REMARKS
...understand the rules and expectations in interacting with others.	3.72	0.48	Strongly Agree
...have the ability to function effectively as an individual and in a group.	3.48	0.67	Strongly Agree
...acknowledge and respect team member's perspectives.	3.74	0.54	Strongly Agree
...show respect to others' opinions during disagreement	3.74	0.45	Strongly Agree
...have the ability to integrate ideas with group members.	3.64	0.54	Strongly Agree



Weighted Mean	3.66
SD	0.54
Verbal Interpretation	Very high

Teamwork requires respect. The mean ($M = 3.74$, $SD = 0.54$) shows a very high level of student's career readiness to employability skills in terms of teamwork. This implies that respect is such a big word to a team for them work in unity. This means that whenever someone from the group give his/her disagreement about the topic tackled, it is not good to show disrespect but rather acknowledge and respect their own perspectives. The mean is slightly lower ($M = 3.72$, $SD = 0.48$), indicates a very high level of student's career readiness to employability skills in terms of teamwork. This says that rules and regulations within a particular team must highly be observed for them to lead in a good teamwork.

The status of student's career readiness to employability skills in terms of teamwork attained a weighted mean score of 3.66, a standard deviation of 0.54 and was verbally interpreted as *very high* among the respondents.

This means that teams get successful as they shows and pays respect with the opinion given by the other member or people

around them. As such, whenever disagreement with the ideas happen, respect is still given. Through that, teamwork also help them to collaborate good ideas that they can effectively apply in their task.

Table 10 shows the status of student's career readiness to employability skills in terms of reliability. The statements, mean, standard deviation and remarks are also shown here.

The mean ($M = 3.77$, $SD = 0.46$) shows a very high level of student's career readiness to employability skills in terms of reliability. This implies that students get reliable information by searching different ideas from different sources that makes the topic clear. While the mean is slightly lower ($M = 3.63$, $SD = 0.53$), indicates a very high level of student's career readiness to employability skills in terms of reliability. This means that whatever information students get from others this must be kept confidential.

Table 10 Status of Career Readiness of Students to Employability Skills in Terms of Reliability

I...	MEAN	SD	REMARKS
...search information when I do not understand the problem to make it clear.	3.77	0.46	Strongly Agree
...provide true and exact information.	3.55	0.55	Strongly Agree
...keep confidential information or conversation.	3.63	0.53	Strongly Agree
...can be trusted to handle confidential problem.	3.60	0.57	Strongly Agree
...give reliable information and not from hearsay only.	3.58	0.57	Strongly Agree
Weighted Mean	3.63		
SD	0.54		
Verbal Interpretation	Very high		

The status of student's career readiness to employability skills in terms of reliability attained a weighted mean score of 3.63, a standard deviation of 0.54 and was verbally interpreted as *very high* among the respondents.

This indicates that reliability must be practiced at all times. Keeping information that are confidential is much needed to a group. Also, giving reliable information or ideas must the thing to be shared only do avoid negative understanding or confusion to others.

Test of Significant Relationship between Students Entrepreneurial Abilities and Career Readiness as to Vocational Competence

To test the significant relationship between student's entrepreneurial abilities and career readiness as to vocational competence in terms practical skills, occupational knowledge and decision-making they were treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.



Table 11 Significant Relationship between Students Entrepreneurial Abilities and Career Readiness as to Vocational Competence

Entrepreneurial Abilities (IV)	Career Readiness as to Vocational Competence (DV)		
	Practical Skills	Occupational Knowledge	Decision-Making
Problem solving: Pearson Correlation Significance(2-Tailed) N	0.43** <.001 204	0.50** <.001 204	0.35** <.001 204
Creativity : Pearson Correlation Significance(2-Tailed) N	0.55** <.001 204	0.45** <.001 204	0.53** <.001 204
Adaptability : Pearson Correlation Significance(2-Tailed) N	0.53** <.001 204	0.59** <.001 204	0.50** <.001 204
Effective communication : Pearson Correlation Significance(2-Tailed) N	0.45** <.001 204	0.46** <.001 204	0.44** <.001 204

The correlation coefficients measure the strength and direction of the relationship between student’s entrepreneurial abilities and career readiness as to vocational competence in terms practical skills, occupational knowledge and decision-making. A positive correlation indicates that as level of student’s entrepreneurial abilities increase, career readiness as to vocational competence also tends to increase. Correlations were computed among four communication style on data for 204 students. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

The correlation coefficients range from 0.35 to 0.59, indicating a low to moderate positive relationship and was significant between the students entrepreneurial abilities and career readiness as to vocational competence.

This means that students demonstrate proactive problem-solving skills, critical thinking, and innovative application of knowledge. They adapt to change, explore ideas, prioritize tasks, respond positively to feedback, and value ongoing learning. They tend to understand conflict resolution, transform ideas into practical applications, analyze facts, prepare strategic plans, differentiate fact from assumption, evaluate opinions, analyze situations, understand key concepts, use specialized tools, generate SWOT analyses, take risks, use intuition, present achievable options, and quantify success probability in

decision-making in their chosen field.

Overall, students exhibit critical thinking, creative knowledge application, and proactive problem solution. They respect lifelong learning, prioritize work, respond constructively, adjust to change, and are knowledgeable about decision-making, strategic planning, and dispute resolution.

Test of Significant Relationship between Student’s Entrepreneurial Abilities and Career Readiness as to Employability Skills

To test the significant relationship between student’s entrepreneurial abilities and career readiness as to employability skills in terms leadership, teamwork and reliability they were treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

The correlation coefficients measure the strength and direction of the relationship between student’s entrepreneurial abilities and career readiness as to employability skills in terms leadership, teamwork and reliability. A positive correlation indicates that as level of student’s entrepreneurial abilities increase, career readiness as to employability skills also tends to increase. Correlations were computed among four communication style on data for 204 students. A correlation coefficient of 1 indicates a perfect positive, while the coefficient of -1 indicates a perfect negative correlation.



Table 12 Significant Relationship between Student’s Entrepreneurial Abilities and Career Readiness as to Employability Skills

Entrepreneurial Abilities (IV)	Career Readiness as to Employability Skills (DV)		
	Leadership	Teamwork	Reliability
Problem solving: Pearson Correlation	0.51**	0.36**	0.32**
Significance(2-Tailed)	<.001	<.001	<.001
N	204	204	204
Creativity : Pearson Correlation	0.56**	0.39**	0.45**
Significance(2-Tailed)	<.001	<.001	<.001
N	204	204	204
Adaptability : Pearson Correlation	0.45**	0.34**	0.32**
Significance(2-Tailed)	<.001	<.001	<.001
N	204	204	204
Effective communication : Pearson Correlation	0.42**	0.33**	0.34**
Significance(2-Tailed)	<.001	<.001	<.001
N	204	204	204

The correlation coefficients range from 0.35 to 0.59, indicating a low to moderate positive relationship and was *significant* between student’s entrepreneurial abilities and career readiness as to employability skills.

This means that students demonstrate proactive problem-solving skills, critical thinking, and innovative application of knowledge. They adapt to change, explore ideas, prioritize tasks, respond positively to feedback, and value ongoing learning. They tend to effectively use brainstorming, persuade, maintain responsibility, respect interpersonal rules, and integrate diverse perspectives, demonstrating a strong sense of leadership, teamwork, and reliability.

Overall, students exhibit proactive problem-solving, critical thinking, and creativity, adapting to change, exploring new ideas, and prioritizing tasks. They prioritize learning, maintain responsibility, and integrate diverse perspectives.

4. CONCLUSION AND RECOMMENDATIONS

Based on the data, the following conclusions are presented.

1. Findings show a significant relationship between entrepreneurial abilities and career readiness as to vocational competence. Therefore, the hypothesis being stated was rejected. This implies that students exhibit abilities like critical thinking, creative knowledge application, and proactive problem-solving skills that make them career-ready regarding their vocational competence.
2. The relationship between entrepreneurial abilities and career readiness as to employability skills was significant; therefore, the stated hypothesis was rejected. This implies that students prioritize learning, maintain responsibility, and integrate diverse perspectives. Furthermore, this helps them to become ready for their chosen careers.

Based on the findings and conclusion made in this study, the following are now suggestions.

1. Students must learn to adapt to things and changes. Accept criticism that will help to improve one’s self. Practice effective communication by expressing your ideas clearly, speaking, and communicating with others at a normal speed so that it does not cause confusion or

misinterpretation among the people you are talking to. Allow yourself to learn new things, especially regarding technology, which may greatly help your chosen path. In making the decision, foresee the positives and negatives it may bring when it is taken into action.

2. This study suggests that teachers must provide more valuable insights and resources that will help students learn to adapt to the changes around them. Give practical exercises that will improve students’ effective communication. Provide training that will boost students’ capability in technology and provide situational problems that will help students practice good decision-making using strategic planning.

3. This also suggests that educational institution or administrators may enhance the entrepreneurship education curriculum, align it more closely with industry needs and job market demands that will help students be ready to face real-world situations. Improve school settings that will help and train students to develop adaptability, effective communication, and decision-making abilities. This will help students be more successful in the career that they choose. Provide on-hand and on-the-job training so that students will experience the real settings. Challenge the students to learn things from their surroundings or community.

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INTEGRATION OF LOCALIZED LEARNING ACTIVITIES: OUTDOOR GAME-BASED INNOVATIVE SUPPLEMENTARY MATERIALS IN TEACHING SCIENCE

Gemma Mabaylan Visitacion

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study was done to look after the effectivity of outdoor game-based learning activities as supplementary material in teaching science 8 to the academic performance. Specifically, it determines the level of the component and characteristics of localized learning activities, student's motivation, and the student's performance. The significant difference on the student's performance and the effect of localized learning activities to student's motivation were tested.

This study employed a descriptive research design to gather information about the significant effect of localized learning activities on the academic performance of selected Grade 8 students in science 8. One hundred forty (140) grade 8 students from Sampaguita Village National High School, San Pedro, Laguna were used as respondents of the study. This study used purposive sampling. The diagnostic test and Summative test, and the checklist questionnaires were the primary sources and instruments in gathering of data. The statistical treatment used for this study is mean, standard deviation, t-test and regression analysis.

Based on the data presented and interpreted, the overall statistical data revealed that level of the component of localized learning activities, the level of the characteristics of localized learning activities, and the level of student's motivation using the localized learning activities performance is in a very great extent. The difference between the diagnostic test and summative test, it showed an analysis of Significant. While the localized learning activities had no significant effect to students' motivation.

Based on the findings, there is a significant difference in the performance of the students in both diagnostic and summative test. Thus, the null hypothesis was rejected. This means that localized learning activities potentially enhanced the overall learning outcomes. There is no significant effect between localized learning activities and student's motivation. Therefore, the null hypothesis was accepted. This means that the localized learning activities in teaching science has no influence on the student's motivation. This means that the factors influencing motivation vary greatly depending on an individual's preferences.

It is highly recommended that localized learning activities may be utilized as supplemental material to enhance students' academic performance so that students will be able to develop engagement and understand the concepts. In addition, the performance monitoring may focus on the students' needs and enable them to learn. Educators may also highlight the significance of science concepts and encourage students. Long-term projects could aid in their understanding of how science benefits them on a daily basis.

KEYWORDS: outdoor game-based; effectivity; supplementary material

1. INTRODUCTION

Playing outside is a vital part of a child's education. Children may engage enjoyable lives if they are provided with a natural learning environment. Education facilitates a person's whole growth and development in terms of their mental, physical, and intellectual capacities. One approach to education that has gained traction in recent years is incorporating games into the classroom. It focuses on helping the learners develop connections so they can get involved in activities that are useful, meaningful, and applicable to real life. The purpose of outdoor games is to connect academic concepts to practical, everyday life knowledge and experiences. One of the outdoor games that is rarely played and nearly forgotten nowadays is the Laro ng Lahi.

Laro ng Lahi is a cultural treasure that has been loved by Filipinos for many years. Laro ng Lahi is not just a game but also an effective way to learn and improve, be it physical, mental, social, and even emotional development. (Art of Blade, n.d.). Filipinos across generations, including our grandparents, parents, and today's adolescents and young children, love to play Laro ng Lahi as their past time. Laro ng Lahi remains an escape for a stressful day, yields happiness to minds, and

improves physical and mental health. This meant that engagement in traditional games is greatly beneficial.

According to Baysal et al. (2022), learning environments should not be made boring. Otherwise, ordinary classroom environments would only be physically modified. This is the reason why teachers are encouraged to develop better methods and approaches in the teaching and learning process so that students may overcome problems, needs, and difficulties in both the school and the community. Republic Act No. 10533 also referred to as the Implementing Rules and Regulations (IRR) of the "Enhanced Basic Education Act of 2013" under rule II Curriculum Section 10, 10.3 Production and Development of Materials states that the production and development of locally produced teaching and learning materials shall be encouraged.

Since educational resources are an essential component of learning, by offering students actual representations of the material they need to learn provides them with relevant learning opportunities (Afolabi, 2019). There are things available everywhere that could be employed in the classroom given the current state of the educational system. Connections are made between the curriculum and the student's life using localized



resources. In teaching Science, using localized outdoor game-based instruction as an intervention will be effective to increase students' engagement and interest in learning. The use of “Larong Lahi” outdoor games in science lessons will help students develop a stronger connection to their cultural roots and helped them better appreciate the significance of their community's history, customs, and traditions.

Therefore, this research will be conducted to provide learners tools for locally designed performance tasks based on local demands will encourage their creativity and flexibility. Moreover, learners are provided with relevant outdoor game-based activities in a meaningful manner by putting these in the performance learning materials in science.

1.1 Statement of the Problem

Specifically, it aims to answer the following questions:

1. What is the level of the component of localized learning activities in terms of:
 - 1.1 objective
 - 1.2 content
 - 1.3 mechanics and
 - 1.4 question in the game?
2. What is the level of the characteristics of localized learning activities in terms of:
 - 2.1 usefulness
 - 2.2 adaptability
 - 2.3 appropriateness and
 - 2.4 integrative value?
3. What is the level of student’s performance in terms of:
 - 3.1 diagnostic test and
 - 3.2 summative test?
4. Is there a significant effect in the level of student’s performance in terms of diagnostic and summative test?
5. Is the localized learning activities significantly affect students’ motivation in terms of:

- 5.1 self-efficacy
- 5.2 self-determination
- 5.3 self-regulation
- 5.4 self-discipline
6. Do the localized learning activities significantly affect students summative test?

2. METHODOLOGY

This study employs a descriptive research methodology to determine the significant effect of localized performance tasks to the academic performance of selected Grade 8 students in science. Nassaji (2015) stated that the goal of descriptive research is to describe a phenomenon and its characteristics. This research is more concerned with what rather than how or why something has happened.

McCombes (2019) stated that descriptive research aims to accurately and systematically describe a population, situation or phenomenon. It can answer what, where, when and how questions, but not why questions. This meant that the primary goal of this research is to find out how the localized performance task affects the respondents' academic performance used in this study.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions will further characterize the results of integrating localized learning materials as supplementary in teaching science.

Level of the Outdoor Game-based Intervention of Localized Features of Performance Task

In this study, the level of the outdoor game-based intervention of localized features of performance task in terms of objective, content, mechanics, and question was investigated.

Table 1 Level of Component of Localized Learning Activities in Terms of Objective

STATEMENTS	MEAN	SD	REMARKS
<i>The objective provides clear steps for the learners.</i>	4.89	0.32	Strongly Agree
<i>The objective provides a time frame that helps the learners create a sense of urgency.</i>	4.83	0.38	Strongly Agree
<i>The objective is appropriate to the comprehension level of the learners.</i>	4.83	0.38	Strongly Agree
<i>The objective is related to the expected learning outcomes.</i>	4.94	0.24	Agree
<i>The objective provides many connections to learners' interests and preferences.</i>	4.78	0.43	Strongly Agree
Weighted Mean	4.86		
SD	0.28		
Verbal Interpretation	<i>Very Great Extent</i>		

Table 1 illustrates the level of component of localized learning activities in terms of objective.

Respondents *Strongly Agree* that the objective is related to the expected learning outcomes (M=4.94, SD=0.24). The objective provides clear steps for the learners (M=4.89, SD=0.32). On the other hand, the respondents *Strongly Agree* that the objective provides many connections to learners' interests and preferences (M=4.78, SD=0.43).

The weighted mean score of 4.86 indicates that the level of the component of localized learning activities in terms of objective was *Very Great Extent*. This means that giving students a specific objective with detailed instructions helps them carry out specific tasks smoothly and creates better means to attain the predicted learning outcomes.



The Level of Component of Localized Learning Activities in terms of Content

Respondents *Strongly Agree* that the content is related to the expected learning outcomes (M=4.89, SD=0.32). The content was clearly stated and can easily be understood by the learners (M=4.78, SD=0.43). On the other hand, the respondents

Strongly Agree that the content is appropriate to the learner's comprehension level is essential for creating effective and inclusive learning experiences that support meaningful understanding and skill development (M=4.56, SD=0.51).

Table 2 Level of The Component of Localized Learning Activities in Terms of Content

STATEMENTS	MEAN	SD	REMARKS
<i>It is clearly stated and can easily be understood by the students.</i>	4.78	0.43	Strongly Agree
<i>It focuses on what learners must learn based on the objectives.</i>	4.89	0.32	Strongly Agree
<i>It is specific and attainable.</i>	4.72	0.46	Strongly Agree
<i>It yields consistent information about the knowledge, skills, or characteristics.</i>	4.67	0.59	Strongly Agree
<i>It is appropriate to the comprehension level of the learners.</i>	4.56	0.51	Strongly Agree
Weighted Mean	4.72		
SD	0.34		
Verbal Interpretation	<i>Very Great Extent</i>		

The level of the component of localized learning activities in terms of content attained a weighted mean score of 4.72 and a standard deviation of 0.34 and was *Very Great Extent* among the respondents. The content was easily understood and comprehended by the students, indicating that it effectively focuses on what learners need to grasp. This alignment with learning objectives ensures that the material meets the

comprehension levels of all students. Consequently, there is confidence that the content not only aligns with educational goals but also provides an inclusive opportunity for all learners to achieve understanding and the comprehension levels of all learners.

Table 3 Level of the Component of Localized Learning Activities in Terms of Mechanics

STATEMENTS	MEAN	SD	REMARKS
<i>Game mechanics are clearly stated and can easily be understood by the students.</i>	4.56	0.51	Strongly Agree
<i>Each challenge will satisfy the learning objective.</i>	4.72	0.46	Strongly Agree
<i>Encourage students to use games to escape into their studies.</i>	4.44	0.86	Strongly Agree
<i>There are many ways to accomplish each goal.</i>	4.33	0.91	Strongly Agree
<i>Players can feel a sense of accomplishment and progress within the game.</i>	4.67	0.49	Strongly Agree
Weighted Mean	4.54		
SD	0.53		
Verbal Interpretation	<i>Very Great Extent</i>		

Respondents *Strongly Agree* that the mechanics satisfy the learning objective (M=4.72, SD=0.46). The mechanics provides the sense of accomplishment and progress for the learners (M=4.67, SD=0.49). On the other hand, the respondents Strongly Agree that the mechanics provides many ways to accomplish each goal (M=4.33, SD=0.91).

The level of the component of localized learning activities in terms of mechanics attained a weighted mean score of 4.54 and a standard deviation of 0.53 and was *Very Great Extent* among the respondents. The mechanics are easy to understand, indicating that the instructions were straightforward and simple, effectively avoiding confusion. The instructions provided were clear and uncomplicated. This clarity is crucial for ensuring that participants can easily grasp and follow the guidelines, facilitating a smoother and more engaging experience.

Table 4 Level of The Component of Localized Learning Activities in Terms of Question in the Game

STATEMENTS	MEAN	SD	REMARKS
<i>The questions are simple and easy to understand.</i>	4.89	0.32	Agree
<i>It is relevant to the overall learning objectives.</i>	4.78	0.73	Strongly Agree
<i>It uses clear and understandable language.</i>	4.94	0.24	Strongly Agree
<i>It does not trick but to assess students' knowledge.</i>	4.89	0.47	Strongly Agree
<i>It focuses on one idea to evaluate.</i>	4.78	0.55	Strongly Agree
Weighted Mean	4.86		
SD	0.43		
Verbal Interpretation	<i>Very Great Extent</i>		



Table 4 illustrates the level of component of localized learning activities in terms of question in the game.

Respondents *Strongly Agree* that the question in the game uses clear and understandable language (M=4.94, SD=0.24). The questions are simple and easy to understand, and it assesses student's knowledge (M=4.89, SD=0.32, 0.47). On the other hand, the respondents Strongly Agree that the question in the game is relevant to the overall learning objectives and focuses only to one idea (M=4.78, SD=0.73, 0.55).

The level of the component of localized learning activities in terms of question in the game attained a weighted mean score of 4.86 and a standard deviation of 0.43 and was *Very Great Extent* among the respondents. The questions are clearly relevant to overall objectives, and it honestly assess students' knowledge focusing to one idea to evaluate. This implies that the questions used in the game are well-aligned with the overall objectives, ensuring that the questions are directly related to the goals of the study. This guarantees that the questions effectively address the core objectives, providing relevant and meaningful

data that contribute to achieving the study's aims.

Level of the Outdoor Game-based Intervention of Localized Features of Performance Task

This study discusses, the level of characteristics of localized learning activities in terms of usefulness, adaptability, appropriateness, and integrative value was investigated.

Level of Characteristics of Localized Learning Activities in terms of Usefulness

Respondents *Strongly Agree* that the learning activity is useful in the sense that the information helps the learner's achieve better result on the assigned task (M=4.11, SD=0.72). The localized learning activity can address the needs of the learner's (M=4.06, SD=0.75). On the other hand, the respondents Strongly Agree that the learning activity is established to organize learning habits towards attaining positive result (M=3.89, SD=0.75).

Table 5 illustrates the level of characteristic of localized learning activities in terms of usefulness.

Table 5 Level of Characteristics of Localized Learning Activities in Terms of Usefulness

STATEMENTS	MEAN	SD	REMARKS
<i>The information in the localized outdoor games helps the learners achieve better results on the assigned task.</i>	4.11	0.72	Strongly Agree
<i>The localized outdoor games provide clear guidelines for independent learning.</i>	3.96	0.72	Strongly Agree
<i>The learners can use it to establish organized learning habits towards attaining positive results.</i>	3.89	0.75	Agree
<i>It can address the needs of the learners across all disciplines.</i>	4.06	0.75	Strongly Agree
<i>It can be used as the basis for an intervention program.</i>	3.92	0.87	Strongly Agree
Weighted Mean	3.99		
SD	0.39		
Verbal Interpretation	<i>Very Great Extent</i>		

The level of characteristics of localized learning activities in terms of usefulness attained a weighted mean score of 3.99 and a standard deviation of 0.39 and was interpreted to Very Great Extent among the respondents. The usability of the localized learning activities provides clear guidelines for independent learning and can be useful to establish organized learning habits

towards attaining positive results. This means that the localized learning activities are designed in a way that makes them easy to use, providing clear instructions for students to follow on their own. This clarity helps students develop structured learning habits, which in turn leads to better outcomes and success in their studies.

Table 6 Level of Characteristics of Localized Learning Activities in Terms of Adaptability

STATEMENTS	MEAN	SD	REMARKS
<i>It creates social awareness and a better understanding of outdoor games.</i>	4.21	0.74	Strongly Agree
<i>It helps learners see the value of what they're learning.</i>	4.06	0.81	Strongly Agree
<i>It develops advanced skills and knowledge relevant to the lessons.</i>	4.22	0.72	Agree
<i>The games are culturally relevant and gender sensitive.</i>	4.30	0.75	Strongly Agree
<i>It helps the learners connect and relate the games in the lesson.</i>	4.13	0.75	Strongly Agree
Weighted Mean	4.18		
SD	0.40		
Verbal Interpretation	<i>Very Great Extent</i>		

Respondents *Strongly Agree* that the localized learning activity uses adaptable games that are culturally relevant and gender

sensitive (M=4.30, SD=0.75). The adaptability of learning activity develops advanced skills and knowledge relevant to the



lessons (M=4.22, SD=0.72). On the other hand, the respondents Strongly Agree that the learner’s adaptability see the value of what they are learning (M=4.06, SD=0.81).

The level of characteristics of localized learning activities in terms of adaptability attained a weighted mean score of 4.18 and a standard deviation of 0.40 and was interpreted to *Very Great Extent* among the respondents. The localized learning activities are adaptable, students are better able to understand the importance and relevance of what they are learning. This adaptability also helps students develop skills that are directly applicable to the tasks they are given, enhancing both their engagement and practical competence. The adaptability of the localized learning activities helps the students to see the value of what they are learning and developed skills relevant to task given.

Respondents *Strongly Agree* that the appropriateness of the learning activity uses instructions that are easy to follow (M=4.37, SD=0.74). The appropriateness of learning activity helps to supplement the teaching process (M=4.35, SD=0.62). On the other hand, the respondents Strongly Agree that the appropriateness of the learning activity is related to the topic and can be improvised (M=4.01, SD=0.71).

The level of characteristics of localized learning activities in terms of appropriateness attained a weighted mean score of 4.19 and a standard deviation of 0.47 and was interpreted to *Very Great Extent* among the respondents. The appropriateness of the localized learning activities helps the students to motivate their interest in playing and helps to facilitates the teaching process. The localized learning activities are well-suited to the students' needs and contexts, which boosts their interest and motivation to participate. The instructions were very easy to follow, thus it helps to the teachers in the teaching process.

Table 7 Level of Characteristics of Localized Learning Activities in Terms of Appropriateness

STATEMENTS	MEAN	SD	REMARKS
<i>It motivates students’ interest and facilitates the learning process.</i>	4.13	0.75	Strongly Agree
<i>It is related to the topic and can be improvised.</i>	4.01	0.71	Strongly Agree
<i>It can be helpful and be used in many lessons at different class levels.</i>	4.07	0.83	Agree
<i>It helps supplement the teaching process.</i>	4.35	0.62	Strongly Agree
<i>The instructions are easy to follow.</i>	4.37	0.74	Strongly Agree
Weighted Mean	4.19		
SD	0.47		
Verbal Interpretation	<i>Very Great Extent</i>		

Level of Characteristics of Localized Learning Activities in Terms of Integrative Value

Respondents Strongly Agree that integrative value of localized performance tasks apply to all learners without extensive teacher’s supervision (M=4.48, SD=0.67). The students

become more active in doing the performance task (M=4.23, SD=0.73). On the other hand, the respondents Strongly Agree that the localized performance task encourages personal responsibility for learning (M=3.90, SD=0.76).

Table 8 Level of Characteristics of Localized Learning Activities in Terms of Integrative Value

STATEMENTS	MEAN	SD	REMARKS
<i>The students become more active in doing the performance task.</i>	4.23	0.73	Strongly Agree
<i>The localized performance task encourages personal responsibility for learning.</i>	3.90	0.76	Strongly Agree
<i>The localized performance tasks are designed to address the needs of the learners to achieve better performance results in learning.</i>	4.41	0.69	Agree
<i>The localized performance tasks are suited to an observable performance task and to the learners' learning style.</i>	3.91	0.77	Strongly Agree
<i>The localized performance tasks apply to all learners without extensive teacher supervision.</i>	4.48	0.67	Strongly Agree
Weighted Mean	4.19		
SD	0.43		
Verbal Interpretation	<i>Very Great Extent</i>		

Integrative value attained a weighted mean score of 4.19 and a standard deviation of 0.43 and was interpreted to *Very Great Extent* among the respondents. This implies that the respondents perceive the integrative value of localized learning activities to be very high. This put forward that these activities

are highly effective in combining various educational elements, contributing significantly to a comprehensive learning experience. The integrative value of the localized learning activities helps the students to become more active in doing the performance task.



Level of Student’s Motivation While Using Localized Learning Activities

In this study, the level of student’s motivation while using

localized learning activities in terms of self-efficacy, self-determination, self-regulation, and self-discipline was investigated.

Table 9 Level of Student’s Motivation in Terms of Self-Efficacy

STATEMENTS	MEAN	SD	REMARKS
<i>I possess the fundamental skills of the game.</i>	4.89	0.32	Strongly Agree
<i>I have a positive attitude and interest in sports.</i>	4.94	0.24	Strongly Agree
<i>I am physically fit for my age.</i>	3.94	0.24	Strongly Agree
<i>I find the performance task easy and relatable.</i>	3.67	0.49	Strongly Agree
<i>My body feels good after the game.</i>	4.94	0.24	Strongly Agree
Weighted Mean	4.88		
SD	0.21		
Verbal Interpretation	<i>Very Great Extent</i>		

Table 9 illustrates the level of significance using the localized learning activities on students’ motivation in terms of self-efficacy. Respondents *Strongly Agree* that self-efficacy develops students to have a positive attitude and interest in sports, and they feel good after the game (M=4.94, SD=0.24). The students possess the fundamental skills of the game (M=4.89, SD=0.32). On the other hand, the respondents Strongly Agree that they find the performance task easy and relatable (M=3.67, SD=0.49).

The level of significance using localized learning activities on students’ motivation in terms of self-efficacy attained a weighted mean score of 4.88 and a standard deviation of 0.21 and was interpreted to *Very Great Extent* among the respondents. This means that localized learning activities have a very strong positive effect on students' motivation, particularly in enhancing their self-efficacy. This means that students feel significantly more capable and confident in their abilities when engaged in these activities. The high level of agreement among respondents suggests that this effect is consistently recognized and valued by the students.

Table 10 Level of Student’s Motivation in Terms of Self Determination

STATEMENTS	MEAN	SD	REMARKS
<i>I am more confident in my ability to win the game.</i>	4.83	0.38	Strongly Agree
<i>I felt motivated to interact with my peers during the game.</i>	4.78	0.43	Strongly Agree
<i>I am satisfied if I lose a match.</i>	4.78	0.43	Strongly Agree
<i>I did my best so that our team won.</i>	4.67	0.49	Strongly Agree
<i>I felt accomplished when I did the right thing in playing the game.</i>	4.39	0.70	Strongly Agree
Weighted Mean	4.69		
SD	0.40		
Verbal Interpretation	<i>Very Great Extent</i>		

Respondents *Strongly Agree* that they are more confident in their abilities to win the game (M=4.83, SD=0.38). The students felt motivated to interact with their peers during the game, and even though they lose the match they still have the feeling of satisfaction (M=4.78, SD=0.43). On the other hand, the respondents Strongly Agree when they accomplished the game right while playing it (M=4.39, SD=0.70).

motivation and their ability to take control of their own learning.

Level of Student’s Motivation in Terms of Self-Regulation

Table 11 illustrates the level of significance using the localized learning activities towards students’ motivation in terms of self-regulation.

The level of students’ motivation while using localized learning activities performance in terms of self-determination attained a weighted mean score of 4.69 and a standard deviation of 0.40 and was interpreted to *Very Great Extent* among the respondents. It implies that localized learning activities greatly enhance students' motivation by fostering a strong sense of self-determination. This indicates that students feel more autonomous and driven when participating in these activities. The consistency among respondents suggests a widely recognized and significant positive effect on students' intrinsic

Respondents *Strongly Agree* that they learn from their mistakes during the game (M=4.89, SD=0.32). The students can stick to the team plan, Students can feel the sense of urgency when challenges occurred and easily finds solution to the problem, and they do not give up easily (M=4.83, SD=0.38). On the other hand, sometimes students could not sense what they are doing unless their attention is called (M=4.72, SD=0.46).



Table 11 Level of Student's Motivation in Terms of Self-Regulation

STATEMENTS	MEAN	SD	REMARKS
<i>I can stick to the plan that the team sets.</i>	4.83	0.38	Strongly Agree
<i>As soon as I see a problem or challenge during the game, I immediately look for a possible solution.</i>	4.83	0.38	Strongly Agree
<i>Often, I don't notice what I'm doing until someone calls it to my attention.</i>	4.72	0.46	Strongly Agree
<i>I learn from my mistakes.</i>	4.89	0.32	Strongly Agree
<i>I do not give up quickly.</i>	4.83	0.38	Strongly Agree
Weighted Mean	4.82		
SD	0.33		
Verbal Interpretation	Very Great Extent		

The level of significance using localized learning activities on students' motivation in terms of self-regulation attained a weighted mean score of 4.82 and a standard deviation of 0.33 and was interpreted to *Very Great Extent* among the respondents. The self-regulation of the localized learning activities helps the students to learn from their mistakes and to

overcome challenges upon playing the game and develop unity among their peers. Localized learning activities that promote self-regulation enable students to independently identify and learn from their mistakes, effectively overcoming challenges they encounter during the game.

Table 12 Level of Student's Motivation in Terms of Self-Discipline

STATEMENTS	MEAN	SD	REMARKS
<i>I often act without thinking, even if the team plan has been set.</i>	5.00	0.00	Strongly Agree
<i>I can stay "cool-headed" when something angers or upsets me during the game.</i>	4.83	0.38	Strongly Agree
<i>I do not break the game rules.</i>	4.61	0.50	Agree
<i>My teammates can depend on me to do what I say I will do.</i>	4.67	0.49	Strongly Agree
<i>I do not cheat, even when the opportunity presents itself.</i>	4.89	0.32	Strongly Agree
Weighted Mean	4.80		
SD	0.27		
Verbal Interpretation	Very Great Extent		

Respondents *Strongly Agree* that they act quickly, of what had the team plan sets (M=5.00, SD=0.00). The students did not cheat even when the opportunity presents itself (M=4.89, SD=0.32). On the other hand, students did not break the game rules (M=4.61, SD=0.50).

significantly boost students' motivation by enhancing their self-discipline. This implies that students are much more capable of managing their own behavior, staying focused, and adhering to their study schedules when engaged in these activities. The strong consensus among respondents highlights the substantial and positive influence of localized learning on students' ability to self-regulate and maintain disciplined study habits.

The level of significance using localized learning activities on students' motivation in terms of self-discipline attained a weighted mean score of 4.80 and a standard deviation of 0.27 and was interpreted to *Very Great Extent* among the respondents. This means that localized learning activities

Level of Student's Performance

In this study, the level of student's performance in terms of diagnostic and summative test were investigated.

Table 13 Level of Student's Performance in Terms of Diagnostic Test

Score	f	%	Descriptive Equivalent
41 - 50	0	0.00	Outstanding
31 - 40	0	0.00	Very Satisfactory
21 - 30	10	7.09	Satisfactory
11 - 20	113	80.14	Fairly Satisfactory
0 - 10	18	12.77	Did not meet Expectation
Total	141	100	
Weighted Mean	14.74		
SD	3.75		
Verbal Interpretation	Fairly Satisfactory		

Out of total number of one hundred and forty-one respondents "11 to 20" received the highest frequency of one hundred and

thirteen (113) or 80.14% of the total population with descriptive equivalent of *Fairly Satisfactory*. While the scores "21 to 30"



received the lowest frequency of ten (10) or 7.09% of the total population with descriptive equivalent of *Satisfactory*. This means that while most participants met a basic level of achievement, relatively few exceeded this level, highlighting potential areas for improvement in the learning process or assessment methods.

With a (*Weighted Mean = 14.74, SD = 3.75*) it shows that the level of student’s performance in terms of diagnostic test has a

descriptive equivalent of *Fairly Satisfactory*. Students’ performance is below as expected since this is the kind of exam used to evaluate a student’s strengths and weaknesses emphasize areas in need of development and direct the formulation of an instructional plan. This highlights specific areas that require improvement and guides educators in developing a targeted instructional plan to address these deficiencies and enhance overall student performance.

Table 14 Level of Student’s Performance in Terms of Summative Test

Score	f	%	Descriptive Equivalent
41 - 50	8	5.67	Outstanding
31 - 40	75	53.19	Very Satisfactory
21 - 30	56	39.72	Satisfactory
11 - 20	2	1.42	Fairly Satisfactory
0 - 10	0	0.00	Did not meet Expectation
Total	141	100	
<i>Weighted Mean</i>	31.87		
<i>SD</i>	5.13		
<i>Verbal Interpretation</i>	<i>Very Satisfactory</i>		

Out of total number of one hundred and forty-one respondents “31 to 40” received the highest frequency of seventy-five (75) or 53.19% of the total population with descriptive equivalent of *Very Satisfactory*. While the scores “11 to 20” received the lowest frequency of two (2) or 1.42% of the total population with descriptive equivalent of *Fairly Satisfactory*. This means that most participants performed well, while only a few showed lower levels of achievement, highlighting the general effectiveness of the learning activities or interventions assessed.

With a (*Weighted Mean = 31.87, SD = 5.13*) it shows that the level of student’s performance in terms of summative test has a descriptive equivalent of *Very Satisfactory*. This means that an

average student is achieving a high level of understanding and competence in the material being assessed. The consistency in performance, as indicated by the relatively low variation, further supports the conclusion that the majority of students are performing well.

Test of Difference Between the Student’s Level of Performance in terms of Diagnostic and Summative Test

In this study, comparison of students’ mean performance in the diagnostic test and summative test is needed to determine the improvement of the learning outcomes.

Table 15 Test of Difference Between the Student’s Level of Performance in Terms of Diagnostic and Summative Test

Localized learning activities	Diagnostic test		Summative test		Mean Difference	95% Confidence Interval of Difference		t	df	Sig (2-tailed)
	Mn	SD	Mn	SD		L	U			
	<i>performance</i>	14.74	3.75	31.87		5.13	17.13			

Legend: *Significant at 0.05

Revealed in Table 18 is the test of difference between the performance of the student’s before and after using the localized learning activities in teaching science. Data obtained through a paired t-test indicated that the increase in the scores in *performance* are significant ($p < 0.05$).

This implies that the students performed better after using the localized learning activities in teaching science. The tailored learning activities effectively engaged students, leading to better understanding and mastery of scientific concepts. Their level of students learning experiences has significantly improved from low to very high. This means that the implementation of localized learning activities in teaching science resulted in improved student performance.



Regression Analysis on the Use of Localized Learning Activities in Teaching Science on Student’s Motivation

Table 16 *Regression Analysis on the Use of Localized Learning Activities in Teaching Science on Student’s Motivation*

Student’s motivation	B	SE	β	t	p
Constant	4.116	.588		6.996*	.000
<i>objective</i>		.105	.012	.11	.913
<i>content</i>		.098	.11	1.126	.262
<i>mechanics</i>		.062	-.034	-.544	.587
<i>question in the game</i>		.074	-.082	-1.109	.27
R-squared			.02		
Adjusted R-squared			-.009		
Standard Error of the Estimate		.317			
F(4, 136)				.698	.594

Student’s motivation	B	SE	β	t	p
Constant	3.154	.831		3.797*	.000
<i>usefulness</i>		.156	.103	.664	.508
<i>adaptability</i>		.085	-.094	-1.105	.271
<i>appropriateness</i>		.098	.137	1.4	.164
<i>integrative value</i>		.125	.055	0.44	.661
R-squared			.029		
Adjusted R-squared			.000		
Standard Error of the Estimate		.315			
F(4, 136)				1.011	.404

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of localized learning activities in teaching science on student’s motivation. The *Components and Characteristics* have no significant effect to the student’s motivation. The F-test of the overall model is not significant (F(4, 136) with, p > 0.05), indicating that the regression model is not a good fit for the data. This means that the overall regression model is not a good fit for the data, suggesting that these factors do not reliably predict or explain variations in students' motivation. It means that the statistical indicators implies that the model does not accurately represent the relationship between the independent variables and the dependent variable. This implies that other variables not included in the model may be more influential in affecting students' motivation in this context. This means that while there may be some effect, the data collected in this study do not provide strong enough support to confidently assert a significant effect.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings, there is a significant difference in the level of student’s performance between diagnostic test and summative test. Therefore, the null hypothesis was rejected. This implies that level of students learning experiences has improved from fairly satisfactory to very satisfactory.

There is no significant effect between the localized learning activities on students’ motivation. Therefore, the null hypothesis was accepted. This implies that the activities studied were not directly influenced students' motivation, potentially enhancing their engagement, interest, and overall learning outcomes.

When it comes to instruction, effective learning experiences often incorporate a combination of classroom instruction, independent study, hands-on activities, and supplemental resources to cater to the needs and preferences of learners.

Considering the aforementioned conclusions, it is recommended that:

1. Teachers may modify the performance tasks based on the students’ needs and level of understanding.
2. Teachers may increase their level of involvement in crafting task-related activities based on their locality.
3. School Heads may provide the allotted budget to produce this localized outdoor game-based learning activities through LAC sessions.

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LEARNING ATTRIBUTES TO STUDENTS' SUCCESS: A RETROSPECTIVE STUDY ON SENIOR HIGH SCHOOL GRADUATES' CHOICE OF CURRICULUM TRACK

Hydelisa R. Trofeo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The main objective of this study was to investigate how the track and strand taken by the senior high school graduates as well as their learning attributes affect their level of success (academic or career). Also, it aimed to determine the following: the demographic profile of the respondents in terms of their track and strand; their learning attributes in terms of teachers' competency, students' competency, and learning environment; and the graduates' level of success in terms of academic or career success. The respondents of the study were forty (40) senior high school graduates from Sta. Catalina Integrated National High School. Descriptive-correlational design was used, and data was gathered using a validated survey-questionnaire. Then, data was tabulated, analyzed, and interpreted.

Results showed that the number of Academic and TVL graduates are equal, but in terms of strand, most of the respondents came from the General Academic Strand. It was also revealed that the senior high school graduates have experienced a very high level of teachers' competency, achieved very high level of students' competency, and very high level of learning environment. As for the academic success, data confirmed that the senior high school graduates have a very high level on it. A very high interpretation was also revealed by the data as deemed by the graduates in terms of the level of career success.

Using regression analysis, a significant effect was proven with regards to the effect of demographic profile in terms of track and strand on the level of Senior High School graduates' academic success contrary to the not significant effect of demographic profile in terms of track and strand on the level of Senior High School graduates' career success.

For the effect of students' learning attributes on the level of senior high school graduates' success, a significant analysis was obtained evidently on the values; teachers' competency, students' competency, and learning environment. Inversely, a not significant analysis was obtained on the effect Students' Learning attributes in terms of teachers' competency, students' competency, and learning environment, on the level of the senior high school graduates' level of career success.

Therefore, this study concludes that the track and strand taken by SHS graduates does not have a significant effect towards their academic success and a not significant effect towards their career success. It is then recommended to conduct more studies to further explore underlying factors that affect the career success of the graduates.

On the other hand, a significant analysis was also obtained on the effect of Students' learning attributes in terms of teachers' competency, students' competency, and learning environment, on the level of the senior high school graduates' level of academic success. Inversely, a not significant analysis was obtained on the effect Students' Learning attributes in terms of teachers' competency, students' competency, and learning environment, on the level of the senior high school graduates' level of career success.

As a conclusion, SHS tracking and learning attributes affects the academic success but not the career success of the senior high school graduates.

KEYWORDS: Learning attributes, teachers' competency, students' competency, learning environment, academic success, career success

1. INTRODUCTION

A curriculum is dynamic. That is, a curriculum is adaptive to major changes, trends, and demands of times and the society. An effective curriculum empowers students for them to become competent contributors of the modern society. Factors affecting career choice has been already a topic of numerous studies for the main reason that decision-making on career choice is significant for students' future and for the success of educational system and employment. According to a study of Pascual (2014), unemployment rate in the country is commonly associated with the misfit graduates produced by universities and colleges and the workforce needed by different companies. The wrong choice of course taken by most of high school students adds to unemployment and underemployment rate of newly graduate students. A similar study conducted by Braza,

et. al. (2015) also mentioned that in the Philippines, initiatives for career guidance started when the Philippine government got alarmed with the growing number of unemployed college graduates and some who got employed in areas not related to their specialization. The lack of career information that could help students make rational decisions was found to be the foremost reason for unemployment, job mismatch, and underemployment.

It is worth noting that the outcome of the senior high school graduates is still in a very rough patch. Of course, there are multiple reasons behind this. However, locally speaking, for the District of Majayjay, there is only one public school that offers senior high school programs. The tracks and strands provided are also limited causing some of the high school completers to



either go to nearby municipalities to enroll on their choice of track while others opt to not complete the K-12 program or just simply enroll to the whatever strand is available.

This urged the researcher to take on the challenge on knowing how the senior high school graduates of the District of Majayjay turned out to be. Aside from tracing the alumni, this research evaluated the relationship between the Curriculum Tracks, Strand, and Career Paths taken by the graduates. This research will be a big help in revisiting the programs offered by the school as well as knowing the needs of the community in terms of addressing issues with unemployment. Through this research, parents can be made aware of their role in guiding their children in deciding on their Senior High School Track. The teachers can use this study to better guide and counsel their students. On the other hand, Guidance Counsellors can use the result of this study in planning for future career guidance activities.

Now that the senior high school program is on its seventh year of implementation it is but necessary to analyze how the curriculum track preference and choices of the senior high school graduates affected their present career and academic situation. The researcher believes that this study must be conducted to assess the Senior High School Tracking and to weigh it's the influences towards the career path choice to better guide the students and their parents.

1.1 Statement of the Problem

This study aimed to determine how the learning attributes of the senior high school graduates affect their level of success. Specifically, it sought to answer the following questions:

1. What is the demographic profile of the Senior High School graduate - respondents in terms of their
 - 1.1 Track
 - 1.2 Strand
2. What is the respondents' level of learning attributes in terms of:
 - 2.1 Teachers' Competency
 - 2.2 Students' Competency
 - 2.3 Learning Environment
3. What is the senior high school graduates' level of success in terms of:
 - 3.1 Academic
 - 3.2 Career
4. Do the learning attributes of the senior high school graduates have a significant effect on their level of success?
5. Does the track or strand taken of the senior high school graduates have a significant effect on the level of success?

2. METHODOLOGY

To facilitate an orderly and careful analysis of the data gathered, descriptive statistics will be used using a quantitative-descriptive survey. According to Nassaji (2015), the goal of descriptive research is to describe a phenomenon and its characteristics. In this type of research, data are often analyzed quantitatively, using frequencies, percentages, averages, or other statistical analyses to determine relationships. A correlational design was also utilized to discover the relationships among variables and to allow the prediction of event from present knowledge.

For the research procedure, the researcher asked for the permission to conduct the study from the Division authorities of the Province of Laguna as well as the from the school administration of Sta. Catalina Integrated National High School. The chosen student-graduates as well as their parents will also be notified of their participation in this research study. After obtaining the approval, the researcher then created the survey-questionnaire. Which was further subjected to validation of content panelists.

Once this was done, survey questionnaires were either given personally to student respondents or through a google form link. Each respondent was oriented and carefully guided by the researcher. Thereafter, the questionnaires were retrieved. Results from the answered questionnaires was then tabulated, analyzed, and interpreted.

3. RESULTS AND DISCUSSION

Senior High School Graduates' Level of Learning Attributes

The demographic profile of the graduate respondents showed that there was an equal distribution between academic and technical-vocational track. General Academic Strand has the highest number of respondents, whereas organic agriculture production got the least number of participants for the study.

Table 1 demonstrates the Senior High School graduates' level of learning attributes in terms of teachers' competency. As gleaned from the data below, the respondents strongly agree that the teachers integrate technology into their instruction to maximize student learning and communicates and collaborates with the home and community for the benefit of students, both gaining the highest mean ($M=4.90$, $SD=0.38$). Similarly, respondents also strongly agree that the teachers maintain a positive and nurturing learning environment, attaining the least mean ($M=4.75$, $SD=0.54$).



Table 1. Senior High School Graduates' Level of Learning Attributes in terms of Teachers' Competency

STATEMENT	Mean	SD	Remarks
My teachers demonstrate an appropriate level of content knowledge in their specialty.	4.83	0.39	Strongly Agree
My teachers integrate technology into their instruction to maximize student learning.	4.90	0.38	Strongly Agree
My teachers monitor their students' performance.	4.83	0.39	Strongly Agree
My teachers maintain a positive and nurturing learning environment.	4.75	0.54	Strongly Agree
My teacher communicates and collaborates with the home and community for the benefit of students	4.90	0.38	Strongly Agree
Grand Mean	4.84		Strongly Agree
Interpretation			Very High

Overall, the Senior High School graduates' level of learning attributes in terms of teachers' competency attained a grand mean of 4.84 and was interpreted Very High as assessed by the respondents. This indicates further that the respondents believed that teachers competency attributes greatly to their

learning. Similarly on the study of Rahmatullah (2016), wherein the significance of teachers' competency was strengthened towards its relationship on the learning attributes of the learners.

Table 2. Senior High School Graduates' Level of Learning Attributes in terms of Students' Competency

STATEMENT	Mean	SD	Remarks
I can absorb and process information easily.	4.60	0.59	Strongly Agree
I can interact through written forms of communication by constructing decent letters and documents.	4.60	0.67	Strongly Agree
I can manage my time effectively to achieve my tasks.	4.65	0.48	Strongly Agree
I can make strategies to achieve a target or a goal.	4.58	0.50	Strongly Agree
I can easily study new concepts to acquire expertise.	4.83	0.39	Strongly Agree
Grand Mean	4.65		Strongly Agree
Interpretation			Very High

Table 2 reveals the Senior High School graduates' level of learning attributes in terms of students' competency. The data below showed that the respondents *strongly agree* that their senior high school have trained and taught them so that they can easily study new concepts to acquire expertise, supported by the highest mean (M=4.83, SD=0.39). In the same manner, the respondents also *strongly agree* on their capability to manage their time effectively to achieve their tasks (M=4.65, SD=0.48). Another aspect wherein the respondents *strongly agree* (M=4.60, SD=) is the fact that they can absorb and process information easily as well as their capability to interact through written forms of communication. The ability to make strategies to achieve a target got the least mean (M=4.58, SD=0.50), however still indicates an interpretation of *strongly agree*.

In general, in terms of the students' competency, the senior high school graduates level reached a grand mean of 4.65 and was interpreted *Very High*. This data further proves that students' competency is indeed one of the factors that contribute to the

overall learning attributes of the graduates. Emery (2015) also has identified students' achievement, or learners' competence as a predictor of a learning attributes which also contributes to the overall success of a school institution.

A conducive learning environment is indeed an important factor in achieving the learners' full potential. Table 3 shows that for the respondents, they *strongly agree* that their senior high school make them feel valued and respected due to the seminars about anti-bullying and school safety as proven by the mean of 4.88 (SD=0.34). The respondents also *strongly agree* that their school is flexible and adaptable to possible changes due to calamities (M=4.78, SD=0.42), and provides a positive and nurturing learning environment (M=4.75, SD=0.49). In the same manner, the data also proved that effective school stakeholders and a safe and orderly learning environment promotes a great learning environment as both statements were marked by the respondents with *strongly agree* with mean of 4.68 (SD=0.57) and 4.65 (SD=0.58) respectively.

**Table 3. Senior High School Graduates' Level of Learning Attributes in terms of Learning Environment**

STATEMENT	Mean	SD	Remarks
My school facilitates a safe and orderly classroom that promotes student learning.	4.65	0.58	Strongly Agree
My school has a positive and nurturing learning environment.	4.75	0.49	Strongly Agree
My school is flexible and adaptable to possible changes due to calamities.	4.78	0.42	Strongly Agree
I feel valued and respected in my school due to seminars about anti-bullying and school safety.	4.88	0.34	Strongly Agree
My school has effective stakeholders (teachers, principal, and administrative staff).	4.68	0.57	Strongly Agree
Grand Mean		4.75	Strongly Agree
Interpretation			Very High

Consequently, with the consistent responses that resulted with strongly agree, without a question, the senior high school graduates highly regard learning environment as one of the attributes for learning. This is backed up by the results of the data wherein the grand mean was 4.75 which equates to *Very*

high. This supports the claim of Taufan (2022), wherein educational facilities and infrastructure as one of the factors that showed a positive significant effect on the students' learning achievement.

Senior High School Graduates' Level of Success

Table 4. Senior High School Graduates' Level of Success in terms of Academic

STATEMENT	Mean	SD	Remarks
I am good at setting specific academic goals.	4.25	0.54	Strongly Agree
I kept on a good study schedule in my class to achieve awards during graduation.	4.55	0.50	Strongly Agree
I try everything I could, to do well in my class to finish my chosen track with flying colors.	4.60	0.50	Strongly Agree
I work hard to prove I could get a good grade.	4.45	0.60	Strongly Agree
I use good study skills when working for my chosen track.	3.95	0.68	Strongly Agree
Grand Mean		4.36	Strongly Agree
Interpretation			Very High

Table 4 shows the level of success of the senior high school graduates that are still currently pursuing their studies. Data indicates that the senior high school graduates *strongly agree* that they are currently academically successful by trying everything they could to do well in class and finish it with flying colors (M=4.60, SD=0.50) by keeping a good study schedule to achieve awards during graduation (M=4.55, SD=0.55). The respondents also *strongly agree* that working hard can get them a good grade (M=4.45, SD=0.60), because they are good in setting specific academic goals and in using good study skills (M=3.95, SD=0.68).

Overall, the Senior High School graduates' level of academic success got a grand mean of 4.36 and was interpreted *Very High* as assessed by the respondents. This result also supports the claim of Li (2017) wherein Chinese students were found to be resilient because of parents' supervision and school

involvement and recognition.

Career Success.

On Table 5, the senior high school graduates' level of success in terms of career is presented. It shows that the senior high school graduates are functioning efficiently in their workplace because they were offered by their employer to pursue further studies (M=4.60, SD=0.50), have been given enough responsibility on their jobs (M=4.53, SD=0.55), receive positive feedback about their career performance (M=4.40, SD=0.55), and do work which their employer asks them to do (M=3.90, SD=0.67), all of these factors receiving a remark of *strongly agree*. Aside from their good performance, the senior high school graduates also *strongly agree* that they are successful in their career because they are in a job that offers them the chance to learn new skills (M=4.28, SD=0.72).



Table 5. Senior High School Graduates' Level of Success in terms of Career

STATEMENT	Mean	SD	Remarks
I receive positive feedback about my career performance.	4.40	0.55	Strongly Agree
I am offered opportunities for further education by my employer.	4.60	0.50	Strongly Agree
I have been given enough responsibility on my job.	4.53	0.55	Strongly Agree
I am in a job which offers me the chance to learn new skills.	4.28	0.72	Strongly Agree
I am able to do work which my employer asks me to do.	3.90	0.67	Strongly Agree
Grand Mean		4.34	Strongly Agree
Interpretation			Very High

All in all, in terms of career success, the senior high school graduates' level of career success has a grand mean of 4.34 and was interpreted *Very High* by the respondents. This contradicts the study of Orbeta et.al. (2018) it was highlighted that students were not very confident about getting hired, even for those who have National Certifications. They believe that college graduates still have a better edge in the labor market.

Effect of Students' Demographic Profile on the Level of Senior High School Graduates' Success

The computed p-values were compared to the level of significance at 0.05 to determine the significant effect of students' demographic profile on the level of Senior High School graduates' success.

Table 6 shows the effect of students' demographic profile in terms of track and strand they chose as to the Senior High School graduates' level of academic and career success.

Table 6. Significant Effect of Students' Demographic Profile on the Level of Senior High School Graduates' Success

Variables		t-value	p-value	Analysis
Track	Academic	-2.90	0.006	Significant
	Career	0.20	0.842	Not Significant
Strand	Academic	-3.21	0.003	Significant
	Career	-0.73	0.469	Not Significant

**significant at .05 level of significance*

A *significant* analysis was obtained on the effect of demographic profile in terms of track ($t=-2.90$, $p=0.006$) and strand ($t=-3.21$, $p=0.000$) on the level of Senior High School graduates' academic success. The obtained p-values were all lower than (0.05) level of significance, which supports the analysis. Differently, a *not significant* analysis was obtained on the effect of demographic profile in terms of track ($t=0.20$, $p=0.842$) and strand ($t=-0.73$, $p=0.469$) on the level of Senior High School graduates' career success.

This further means that students' chosen track and strand contributes to their academic success. Their achievements as they finish the SHS program and as they take on their new academic path in the tertiary level were the result of choosing the right track or strand. This result complements the work of Santos, et. Al (2019) wherein they have pinpointed out that the senior high school graduates have chosen their college degree based on what they have taken for their senior high school track and strand in hopes landing the job that is based on their interest and yields a financial outcome.

Effect of Students' Learning Attributes on the Level of Senior High School Graduates' Success

Table 7 shows the effect of the students' learning attributes in terms of teachers' competency, students' competency, and learning environment, on the level of the senior high school graduates' level of career and academic success.

A *significant* analysis was attained on the effect of Students' learning attributes in terms of teachers' competency ($t=4.20$, $p=0.000$), students' competency ($t=6.18$, $p=0.000$), and learning environment ($t=5.20$, $p=0.000$), on the level of the senior high school graduates' level of academic success. The obtained p-values were all lower than (0.05) level of significance, which supports the analysis.

Inversely, a *not significant* analysis was obtained on the effect Students' Learning attributes in terms of teachers' competency ($t=-0.04$, $p=0.966$), students' competency ($t=0.78$, $p=0.440$), and learning environment ($t=1.44$, $p=0.159$), on the level of the senior high school graduates' level of career success.

This means that the students' learning attributes contribute to their academic success but not on their career success. Olamide (2013) also highlighted the same results on his research,



wherein he pointed out that the student can use all the tools available, however it is still the make-up of the students' personality, drive, ambition, and creativity that synthesizes the efforts of the learners to succeed. In the same manner, a high

level of learning attributes is not directly related to the career success of the senior high school graduates.

Table 7. Significant Effect of Students' Learning Attributes on the Level of Senior High School Graduates' Success

Variables		t-value	p-value	Analysis
Teachers' Competency		4.20	0.000	Significant
Students' Competency	Academic	6.18	0.000	Significant
Learning Environment		5.20	0.000	Significant
Teachers' Competency		-0.04	0.966	Not Significant
Students' Competency	Career	0.78	0.440	Not Significant
Learning Environment		1.44	0.159	Not Significant

4. CONCLUSION AND RECOMMENDATIONS

Based on the foregoing findings, the following conclusion was drawn.

The study shows that the demographic profile of the graduate-respondents has a significant effect on their level of success. This further means that students' chosen track and strand contributes to their academic success. Their achievements as they finished the SHS program and as they take on their new academic path in the tertiary level were the result of choosing the right track or strand.

A significant analysis was also obtained regarding the effect of students' learning attributes in terms of teachers' competency, students' competency, and learning environment on the senior high school graduates' level of academic success.

On the contrary, a not significant analysis was obtained on the effect Students' Learning attributes in terms of teachers' competency, students' competency, and learning environment on the senior high school graduates' level of career success. This means that the students' learning attributes contribute to their academic success but not to their career success.

Based on the findings and conclusion of the study, the following recommendations are hereby offered:

1. This study has analyzed the track and strand taken by the senior high school graduates as well as their current part, which is either academic or pursuing a career. However, a more thorough study could be conducted to include the nature of career that the graduates have taken on. This path of research could bring out more data that can be analyzed and eventually be utilized to enhance the senior high school curriculum. Also with this analysis, students can have a glimpse of their career path once they graduated senior high school.
2. The results of the study revealed a high level of learning attributes and level of success of the senior school graduates; however, it does not equate to the positive relationship towards career success. This indicates that there could be more underlying factors that affect that career success of the graduates like the alarming growth of job mismatch among the graduates. Hence, it is recommended for future researchers to further explore underlying factors that affect the career success of senior high school graduates.

3. The level of success both in academic and career were both regarded very high by the respondents which means that they are currently doing well on their chosen path. This result implies that may it be academic or career, the graduates are regarded as successful. Hence, it is recommended to conduct parallel studies to further check on the status of the SHS graduates.

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THE INFLUENCE OF PARENTING STYLES ON JUVENILE BEHAVIOR: MEDIATING THE ROLE OF SOCIAL BELONGINGNESS

Jasper Ann Pirante Sta.Maria

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The primary purpose of this study is to determine the influence of parenting styles and social belongingness on the juvenile behavior. Specifically, it sought to gauge the perceived level of respondents' parenting styles, social belongingness, and juvenile behavior. The significant effect of the respondents' parenting styles and social belongingness were evaluated.

It used a descriptive design in which researcher-made questionnaire was used to gather data from the respondents. The respondents of this study are the current residents of Bahay Pag-Asa, twenty-one (21) are from Calauan and eighteen (18) are from Sta.Rosa. The data were tabulated and appropriately analyzed to extract valid results through mean, standard deviation, and linear and multiple regression.

The findings showed that the level of parenting styles was minimal in all indicators except democratic parenting style, which is verbally interpreted as being to a great extent. As to the respondents' social belongingness and juvenile behavior, all indicators were interpreted as to a great extent. Moreover, analysis showed that parenting styles significantly affect juvenile behavior, and that respondents' social belongingness significantly affects their juvenile behavior.

Parenting styles and social belongingness significantly affected juvenile behavior, thus both hypotheses are rejected. These results imply that interventions increase community engagement and that youth programs, mentoring, and neighborhood revitalization efforts, effectively reduce youth delinquent behavior. These interventions provide positive opportunities, social support, and prosocial role models, which can counteract risk factors for delinquency.

In light of the conclusions drawn from the findings, the following recommendations are advanced: parents' active involvement is needed; they may critically analyze how the different parenting styles affect the development of their children's behavior. Juveniles may comprehend the significant effect of creating their individuality as much as surrounding themselves with individuals suitable for their welfare. Furthermore, school officials and local government unit officials may propose sports and physical activity programs to benefit their community/school youth. Lastly, future researchers may conduct further studies and use other factors that can influence positive behavior in juveniles.

KEYWORDS: Influence; Parenting Styles; Juvenile Behavior

1. INTRODUCTION

Parenting is an essential component of human existence, and how parents raise their children substantially influences their growth, conduct, and overall general wellness. It involves providing guidance, emotional support, discipline, and care to help children flourish into healthy and well-adjusted individuals. It can be laborious and gratifying, requiring fortitude, compassion, and devotion. It is a never-ending journey of enlightenment and growth for both the children and the parents. Parenting style is an important aspect of parenting since it encompasses the attitudes, behaviors, and tactics parents use as caregivers and guides. Parenting styles and approaches vary widely based on cultural, societal, and individual factors.

Understanding the various parenting styles and their repercussions is critical to understanding how these methods impact children's lives. These strategies and styles are based on the parents' behaviors and emotional responses towards their children. They reflect the family's emotional environment and set the groundwork for parent-child connections.

Juvenile delinquency often refers to people under the age of 18 who engage in illegal, deviant, or socially inappropriate

behavior. It includes a wide range of behaviors, from small infractions like truancy, vandalism, and substance abuse to more serious crimes like theft, assault, and even killing. Understanding these behaviors' underlying causes and effects is critical for developing effective preventive and intervention strategies. Juvenile delinquency is a critical societal issue that has captivated the attention of academics, legislators, and the public. The behavior of young people participating in illegal activities has far-reaching effects on their own lives and families, communities, and society.

Social belonging is a basic human need that crosses cultural, geographical, and temporal borders. It expresses the intrinsic urge to connect with people, be accepted and respected as a community member, and have a sense of belonging that improves one's quality of life. This study dives into the complex and varied concept of social belongingness, attempting to highlight its importance in human well-being, mental health, and societal ramifications. The need to belong has been a motivating force in human social evolution. It has influenced the development of communities, societies, and the complicated network of interpersonal interactions that underpins human existence. From primitive tribal attachments to modern internet social networks, the need to belong has



influenced our emotional, psychological, and physical well-being.

1.1 Statement of the Problem

Specifically, this answered the following questions:

1. What is the perceived level of parenting styles in terms of:
 - 1.1 Disciplinary Parenting
 - 1.2 Democratic Parenting
 - 1.3 Indulgent Parenting, and
 - 1.4 Neglectful Parenting?
2. What is the perceived level of the following social belongingness:
 - 2.1 Community Engagement
 - 2.2 Social Norms
 - 2.3 Resilience, and
 - 2.4 Peer Relationship?
3. What is the perceived level of juvenile behavior relative to:
 - 3.1 Empathy
 - 3.2 Altruism
 - 3.3 Optimism, and
 - 3.4 Integrity?
4. Do parenting styles have a significant effect on juvenile behavior?
5. Does social belongingness have a significant effect on juvenile behavior?

2. METHODOLOGY

In this study, a descriptive research method was utilized. Descriptive research aims to systematically describe a

population, situation, or phenomenon, answering questions such as what, where, when, and how, but not why. Unlike experimental research, descriptive research does not involve controlling or manipulating variables but focuses on observing and measuring them. Various research methods can be employed within a descriptive research design to investigate one or more variables.

A descriptive study aims to describe and interpret what currently exists. It focuses on the conditions of existing relationships, prevalent practices, beliefs, ongoing processes, felt effects, or emerging trends. This type of research is often conducted alongside comparative research, which involves analyzing similarities and differences between different groups or conditions.

3. RESULTS AND DISCUSSION

This chapter is dedicated to presenting and discussing the diverse results gleaned from the analysis of the data collected in this study. Specifically, it examines how different parenting styles and social belongingness contribute to juvenile behavior, intending to enhance existing support systems for juveniles in Bahay Pag-Asa in Calauan and Sta. Rosa, Laguna.

In essence, this chapter represents a crucial step towards enhancing our understanding of juvenile behavior and improving support systems for at-risk youth in Laguna. Through rigorous analysis and thoughtful discussion, it strives to contribute to the ongoing efforts to promote positive outcomes for juveniles needing assistance and guidance.

Table 1 Level of Parenting Styles in terms of Disciplinary

Statement	Mean	SD	Remarks
1. My parents have very strict rules for behavior.	3.00	1.43	To a Little Extent
2. When I break the rules, my parents yell at me.	2.29	1.13	To a Very Little Extent
3. My parents believe in being tough on me when I misbehave.	2.59	1.36	To a Very Little Extent
4. I get punished harshly when I do something wrong.	2.17	1.27	To a Very Little Extent
5. My parents thump me when I am disobedient.	2.24	1.38	To a Very Little Extent
6. My parents punish me for weeks if I do not follow their rules.	1.78	1.28	No Extent at All
7. My parents use physical punishment like thumping.	1.85	1.20	To a Very Little Extent
8. I think my parents' discipline is too harsh.	2.44	1.50	To a Very Little Extent
Weighted Mean	2.30		
SD	1.32		
Verbal Interpretation			To a Very Little Extent

The data shows that “My parents have very strict rules for behavior.” has the highest mean of 3.00 and a standard deviation of 1.43 with an interpretation of “To a Little Extent.” On the other hand, the statement “My parents punish me for weeks if I do not follow their rules” has the lowest mean with a mean score of 1.78 and a standard deviation of 1.28 with an interpretation of “No Extent at All.”

Fantuzzo (2020) states that the home environment is considered a powerful influence on children. A family is viewed as

consequential for child developmental outcomes such as cognitive ability, school readiness, academic achievement, and emotional adjustment.

Historically, examinations of the influence of home environments on developmental outcomes have focused on distal variables as the primary measures of home experience, such as family income, parents’ educational level, parents’ occupational status, parental involvement, and parenting styles.



Table 2 Level of Parenting Styles in terms of Democratic

Statement	Mean	SD	Remarks
1. My parents listen to my opinion when making family decisions.	3.41	1.36	To a Great Extent
2. My parents explain the reasons behind the rules they make.	3.68	1.42	To a Great Extent
3. My parents praise me when I behave well.	3.32	1.33	To a Little Extent
4. I get punished harshly when I do something wrong.	3.85	1.37	To a Great Extent
5. My parents correct my misbehavior by discussing it with me.	4.12	1.31	To a Great Extent
6. My parents thoughtfully discipline me, not just anger.	3.93	1.37	To a Great Extent
7. I feel my parents respect my thoughts and feelings.	3.66	1.35	To a Great Extent
8. My parents set fair consequences when I misbehave.	3.34	1.37	To a Little Extent
Weighted Mean	3.66		
SD	1.36		
Verbal Interpretation	To a Great Extent		

Table 2 illustrates the Level of Parenting Styles in terms of Democratic. From the statements above, “My parents correct my misbehavior by discussing it with me.” yielded the highest mean score (M=4.12, SD=1.31) and was remarked as To a Great Extent. On the other hand, the statement “My parents encourage me to be independent and think for myself” received the lowest mean score of responses (M=3.32, SD=1.33) and was remarked to a Great Extent.

The Level of Parenting Styles in terms of Democratic attained a weighted mean score of 3.66 and a standard deviation of 1.36 and was remarked To a Little Extent among the respondents. Their study revealed that children raised by authoritative parents exhibited higher levels of emotional intelligence, including better emotional awareness, regulation, and interpersonal skills.

Table 3 Level of Parenting Styles in terms of Indulgent

Statement	Mean	SD	Remarks
1. I have parents who give me whatever I ask for.	3.07	1.13	To a Little Extent
2. My parents have few rules for my behavior.	3.20	1.31	To a Little Extent
3. I have parents who do not discipline me much when I misbehave.	2.02	1.16	To a Very Little Extent
4. My parents make excuses when I break rules instead of disciplining me.	1.71	1.09	No Extent at All
5. I believe my parents spoiled me with gifts and treats.	3.02	1.52	To a Little Extent
6. I feel that my parents do not punish me enough when I do something wrong.	2.32	1.39	To a Very Little Extent
7. My parents allow me to do whatever I want most of the time.	2.78	1.35	To a Little Extent
8. My parents rarely say no if I ask for something.	2.63	1.24	To a Little Extent
Weighted Mean	2.59		
SD	1.28		
Verbal Interpretation	To a Very Little Extent		

Table 3 illustrates the level of parenting styles in terms of indulgence. From the statements above, “My parents have few rules for my behavior.” yielded the highest mean score (M=3.20, SD=1.31) and was remarked as To a Little Extent. On the other hand, the statement “My parents make excuses when I break the rules instead of disciplining me.” received the lowest mean score of responses with (M=1.71, SD=1.09) remarked No Extent at All. The Level of Parenting Styles in terms of

Indulgent attained a weighted mean score of 2.59 and a standard deviation of 1.28, which was remarked to a very small extent among the respondents. While indulgent parenting may initially seem appealing due to its emphasis on warmth and lack of strict rules, it can lead to adverse outcomes in children's development. These include poor self-regulation, academic underachievement, emotional difficulties, and increased risk of delinquent or aggressive behaviors.

Table 4 Level of Parenting Styles in terms of Neglected

Statement	Mean	SD	Remarks
1. My parents are often too busy to listen to my problems.	2.56	1.42	To a Very Little Extent
2. My parents frequently fail to provide for my basic needs (food, clothes, etc.).	2.32	1.26	To a Very Little Extent
3. My parents leave me on my own a lot.	2.39	1.36	To a Very Little Extent
4. My parents do not comfort me when I am upset.	1.93	1.28	To a Very Little Extent
5. My parents do not care if I do poorly in school.	1.98	1.09	To a Very Little Extent
6. My parents are often under the influence of alcohol or drugs and do not care about me.	1.37	0.93	No Extent at All
7. My parent forgets important events like my birthday or sports games.	2.07	1.37	To a Very Little Extent
8. I feel unsupported and neglected by my parent.	1.98	1.37	To a Very Little Extent
Weighted Mean	2.07		
SD	1.26		
Verbal Interpretation	To a Very Little Extent		



Table 4 illustrates the Level of Parenting Styles in terms of Neglected. From the statements above, “My parents are often too busy to listen to my problems.” yielded the highest mean score (M=2.56, SD=1.42) and was remarked as To a Very Little Extent.

On the other hand, the statement “My parents are often under the influence of alcohol or drugs and do not care about me.” received the lowest mean score of responses with (M=1.37,

SD=0.93) was remarked No Extent at All. The Level of Parenting Styles in terms of Neglected attained a weighted mean score of 2.07 and a standard deviation of 1.26 and was remarked To a Very Little Extent among the respondents. The negative consequences of neglectful parenting on various aspects of child development, including psychological well-being, academic performance, social adjustment, and risk for delinquent behavior and mental health problems.

Table 5 Level of Social Belongingness in terms of Community Engagement

Statement	Mean	SD	Remarks
1. I feel comfortable being myself around my peers.	3.66	1.20	To a Great Extent
2. I feel confident in my individuality compared to other kids my age.	3.66	1.27	To a Great Extent
3. I know I can be accepted for who I am by people around me.	3.73	1.21	To a Great Extent
4. I feel free to have different interests than my friends.	3.44	1.21	To a Great Extent
5. I feel at ease around peers who are different than my friends.	3.37	1.30	To a Little Extent
6. I treat all my classmates with kindness regardless of their style.	3.73	1.15	To a Great Extent
7. I avoid judging people based on societal stereotypes.	3.29	1.45	To a Little Extent
8. I make an effort to include all classmates, not just those in my friend group.			
Weighted Mean	3.59	1.28	
SD			
Verbal Interpretation			To a Great Extent

Table 5 presents the level of social belongingness in terms of community engagement.

From the statements above, “I actively participate in community events and activities.” yielded the highest mean score (M=3.78, SD=1.30) and was remarked as To a Great Extent. On the other hand, the statement “I attend community organization meetings (church, sports, etc.)” received the lowest mean score of responses with (M=2.90, SD=1.23) yet was also remarked To a Little Extent.

The Level of Social Belongingness in terms of Community Engagement attained a weighted mean score of 3.50 and a

standard deviation of 1.28 and was noted To a Great Extent among the respondents. This actively involved in community activities and decision-making processes exhibited higher levels of civic engagement, leadership skills, and a stronger sense of empowerment and social responsibility.

Additionally, communities with active youth participants experienced enhanced safety and stronger cohesion. The study underscored the crucial role of youth community engagement in promoting individual development and overall community well-being.

Table 6 Level of Social Belongingness in terms of Social Norms

Statement	Mean	SD	Remarks
1. I actively participate in community events and activities.	3.78	1.30	To a Great Extent
2. I volunteer to help out at my school.	3.44	1.29	To a Great Extent
3. I know our neighbors well.	3.71	1.23	To a Great Extent
4. I attend community organization meetings (church, sports, etc.)	2.90	1.23	To a Little Extent
5. I invite neighbors to our home for dinners and celebrations.	3.39	1.41	To a Little Extent
6. I know the importance of being involved in our community.	3.66	1.32	To a Great Extent
7. I help out and interact with people in need in our community.	3.61	1.21	To a Little Extent
Weighted Mean	3.50	1.28	
SD			
Verbal Interpretation			To a Great Extent

Table 6 illustrates the Level of Social Belongingness in terms of Social Norms. From the statements above, “I feel confident in my individuality compared to other kids my age.” yielded the highest mean score (M=3.66, SD=1.20) and was remarked as To a Great Extent. On the other hand, the statement “I avoid judging people based on societal stereotypes” received the lowest mean score of responses (M=3.29, SD=1.45) yet was also remarked To a small extent.

The Level of Social Belongingness in terms of Social Norms attained a weighted mean score of 3.59 and a standard deviation of 1.25 and was noted To a Great Extent among the respondents. Social norms are crucial in shaping individuals' sense of social belongingness. When individuals perceive that their attitudes and behaviors align with the norms of a particular social group, they are more likely to experience a heightened sense of belongingness and social acceptance.



Table 7 Level of Social Belongingness in terms of Resilience

Statement	Mean	SD	Remarks
1. I can make new friends even if I have to change schools.	3.54	1.33	To a Great Extent
2. I try again if someone rejects me the first time I approach them.	3.00	1.41	To a Little Extent
3. I feel confident starting conversations with peers I do not know well.	3.12	1.31	To a Little Extent
4. I do not take rejection from others personally.	3.10	1.28	To a Little Extent
5. I feel capable of overcoming social setbacks.	3.83	1.38	To a Great Extent
6. I keep trying even if I feel excluded from some social situations.	3.41	1.40	To a Great Extent
7. I can adapt my social skills to connect with different groups.	3.61	1.21	To a Great Extent
8. I see social challenges as chances to learn and grow.	3.76	1.38	To a Great Extent
Weighted Mean	3.40		
SD	1.33		
Verbal Interpretation			To a Great Extent

Table 7 illustrates the Level of Social Belongingness in terms of Resilience. From the statements above, “I see social challenges as chances to learn and grow.” yielded the highest mean score (M=3.76, SD=1.38) and was remarked as To a Great Extent. On the other hand, the statement “I try again if someone rejects me the first time I approach them.” received the lowest mean score of responses with (M=3.00, SD=1.41) yet was also remarked To a Little Extent.

The Level of Social Belongingness in terms of Resilience attained a weighted mean score of 3.40 and a standard deviation of 1.33 and was remarked as To a Great Extent among the respondents.

The crucial role of social belongingness in fostering resilience. Strong social connections, supportive communities, and a sense of belonging to positive social groups have enhanced individuals' ability to cope with adversity, promote psychological well-being, and facilitate resilience in the face of challenges.

The study's findings underscored that a robust sense of belonging within these supportive networks acts as a crucial buffer against the detrimental impacts of violence exposure. Specifically, youths who experienced a higher degree of social belongingness exhibited greater psychological well-being. This includes reduced levels of anxiety, depression, and trauma-related symptoms, as the emotional support and acceptance from these groups provide a vital source of stability and comfort.

Table 8 Level of Social Belongingness in terms of Peer Relationship

Statement	Mean	SD	Remarks
1. I feel accepted by other kids my age.	3.78	1.20	To a Great Extent
2. I feel like I fit in with other kids my age.	3.07	1.31	To a Little Extent
3. Other kids want me to be their friend.	3.56	1.27	To a Great Extent
4. It is easy for me to make friends with other kids my age.	3.66	1.28	To a Great Extent
5. I have a lot of fun with other kids my age.	3.37	1.39	To a Little Extent
6. I do not feel lonely when I am around other kids my age.	3.41	1.31	To a Great Extent
7. I feel like I belong when I am with other kids my age.	3.32	1.24	To a Little Extent
8. I had more friends of my age.	3.54	1.38	To a Great Extent
Weighted Mean	3.46		
SD	1.30		
Verbal Interpretation			To a Great Extent

Table 8 illustrates the Level of Social Belongingness in terms of Peer Relationships. From the statements above, “I feel accepted by other kids my age.” yielded the highest mean score (M=3.78, SD=1.38) and was remarked as To a Great Extent. On the other hand, the statement “I feel like I fit in with other kids my age.” received the lowest mean score of responses with (M=3.07, SD=1.31) yet was also remarked To a Little Extent. The Level of Social Belongingness in terms of Peer Relationship attained a weighted mean score of 3.46 and a standard deviation of 1.30 and was remarked as To a Great Extent among the respondents.

Ferris, Lian, Brown, and Morrison (2015) explored the impact of peer relationships on organizational commitment and job satisfaction. The results indicated that employees who experienced high-quality peer relationships characterized by trust, respect, and support reported a stronger sense of belongingness within their work environment, leading to increased job satisfaction, organizational commitment, and reduced intentions to leave their jobs.



Table 9 Level of Juvenile Behavior in terms of Empathy

Statement	Mean	SD	Remarks
1. I try to understand how other people feel.	3.73	1.25	To a Great Extent
2. I feel bad when I see someone else being bullied.	3.54	1.36	To a Great Extent
3. I try to help others when they need it.	3.90	1.23	To a Great Extent
4. I can tell when someone else is unhappy.	3.34	1.34	To a Little Extent
5. I compliment others when they have done something well.	3.88	1.23	To a Little Extent
6. When a friend is upset, I try to understand how they feel.	3.59	1.38	To a Little Extent
7. I offer to help others if they need it.	3.59	1.21	To a Great Extent
8. I care if my actions upset someone.	3.22	1.35	To a Little Extent
Weighted Mean	3.60	1.29	
SD			To a Great Extent
Verbal Interpretation			

From the statements above, “I try to help others when they need it.” yielded the highest mean score (M=3.90, SD=1.23) and was remarked as To a Great Extent. On the other hand, the statement “I care if my actions upset someone.” received the lowest mean score of responses with (M=3.22, SD=1.35) yet was also remarked To a Little Extent. The Level of the Teenage Positive Behavior relative to Empathy. Attained a weighted mean score of 3.60 and a standard deviation of 1.29 and was remarked as To a Great Extent among the respondents.

High levels of empathy have been associated with increased prosocial behavior, positive peer relationships, emotional well-being, and academic performance.

Table 10 Level of Juvenile Behavior in terms of Altruism

Statement	Mean	SD	Remarks
1. I go out of my way to help someone in need.	3.88	1.11	Agree
2. I share my things with other kids, even if I do not know them well.	3.46	1.27	Agree
3. I help other kids with projects or schoolwork when they need it.	3.55	1.14	Agree
4. I give money or donations to charity to help others.	3.32	1.18	Undecided
5. I volunteer my time to help groups or causes I care about.	3.25	1.30	Undecided
6. I stand up to friends if they are bullying someone weaker.	3.20	1.38	Undecided
7. I go out of my way to include someone if they look lonely.	3.56	1.25	Agree
8. Helping others makes me feel good.	3.85	1.14	Agree
Weighted Mean	3.51	1.22	
SD			To a Great Extent
Verbal Interpretation			

Table 10 illustrates the Level of Teenage Positive Behavior relative to Altruism. From the statements above, “I go out of my way to help someone in need.” yielded the highest mean score (M=3.88, SD=1.11) and was remarked as To a Great Extent. On the other hand, the statement “I stand up to friends if they are bullying someone weaker” received the lowest mean score of responses (M=3.20,SD=1.38) yet was also remarked To a small extent.

The Level of Juvenile Behavior relative to Altruism attained a weighted mean score of 3.51 and a standard deviation of 1.22 and was remarked as To a Great Extent among the respondents.

The positive impacts of altruism on various aspects of adolescent development, including social skills, peer relationships, self-esteem, emotional well-being, personal growth, and academic achievement.

Table 11 Level of Juvenile Behavior in terms of Optimism

Statement	Mean	SD	Remarks
1. I expect more good things to happen to me than bad.	3.85	1.23	To a Great Extent
2. I believe more good things than bad things will happen in the future.	3.88	1.16	To a Great Extent
3. I am hopeful even when things do not go my way.	3.35	1.28	To a Little Extent
4. When bad things happen, I expect I will bounce back quickly.	3.24	1.32	To a Little Extent
5. I try to see the positive side of every situation.	3.73	1.10	To a Great Extent
6. I believe I will be successful with the goals I set.	3.98	1.14	To a Great Extent
7. Thinking about my future makes me excited and happy.	4.05	1.05	To a Very Great Extent
8. I do not let bad experiences get me down for long.	3.76	1.21	To a Great Extent
Weighted Mean	3.73	1.19	
SD			To a Great Extent
Verbal Interpretation			



Table 11 illustrates the Level of Teenage Positive Behavior relative to Optimism. From the statements above, “Thinking about my future makes me excited and happy.” yielded the highest mean score (M=4.05, SD=1.08) and was remarked as To a Great Extent. On the other hand, the statement “When bad things happen, I expect I will bounce back quickly.” received the lowest mean score of responses with (M=3.24, SD=1.32) yet was also remarked To a Little Extent.

The Level of the Teenage Juvenile behavior as to Optimism. Attained a weighted mean score of 3.75 and a standard deviation of 1.19 and was, To a Great Extent among the respondents. Positive impacts of optimism on various aspects of adolescent development, including psychological well-being, prosocial behavior, academic achievement, resilience, and health-related behaviors.

Table 12 Level of Juvenile Behavior in terms of Integrity

Statement	Mean	SD	Remarks
1. When I find something that is not mine, I return it to its owner.	4.20	1.04	To a Very Great Extent
2. I think it is important to live by my values.	3.83	1.23	To a Great Extent
3. I stand up for people who are bullied or teased.	3.66	1.17	To a Great Extent
4. I confess to my mistakes even if no one would know I made them.	3.66	1.20	To a Great Extent
5. I think honesty is an important quality in a friend.	4.24	1.03	To a Very Great Extent
6. I work hard even on school subjects I do not like.	3.56	1.36	To a Great Extent
7. I try to do the right thing, even if it is unpopular.	3.90	1.21	To a Great Extent
8. I keep my promises and commitments to others.	4.02	1.16	To a Great Extent
Weighted Mean	3.91		
SD	1.18		
Verbal Interpretation			To a Great Extent

From the statements above, “I think honesty is an important quality in a friend.” yielded the highest mean score (M=4.24, SD=1.03) and was remarked as To a Very Great Extent. On the other hand, the statement “I work hard even on school subjects I do not like.” received the lowest mean score of responses with (M=3.56, SD=1.36) yet was also remarked To a Great Extent.

The Level of Teenage Positive Behavior relative to Integrity attained a weighted mean score of 3.91 and a standard deviation of 1.18 and was remarked To a Great Extent among the respondents.

Integrity positively impacts various aspects of adolescent development, including prosocial behavior, academic achievement, psychological well-being, moral decision-making, and reduced delinquent behavior.

Table 13 Regression Analysis of the Juvenile as Predicted by Disciplinarian Parenting Style

Model	B	SE	β	t	p
Constant	0.14	0.06		2.36	0.019
Empathy		.03	0.02	0.58	0.561
Pro Social Behavior		.05	-0.01	-0.12	0.906
Altruism		.05	0.19	3.54*	< .001
Optimism		.05	-0.29	-5.83*	< .001
Integrity		.04	1.04	26.41*	< .001
R-squared			0.94		
Adjusted R-squared			0.93		
Standard Error of the Estimate			8.39		
F(5,394)				1133*	< .001

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of parenting style in terms of discipline on juvenile behavior.

The regression model explains 94% of the variance in teenage positive behavior (R-squared = 0.94). Specifically, altruism ($\beta = 0.19$, $p < .001$); optimism ($\beta = 0.19$, $p < .001$); integrity ($\beta =$

1.14, $p < .001$). The F-test of the overall model is significant (F (5,394) = 1133, $p < .001$), indicating that the egression model is a good fit for the data. The standard error of the estimate is 8.39, reflecting the average deviation between observed and predicted juvenile behavior.



Table 14 Regression Analysis of the Juvenile as Predicted by the Democratic Parenting Style

Model	B	SE	β	t	p
Constant	0.35	0.09		3.763	< .001
Empathy		0.046	0.11	2.344*	0.020
Pro Social Behavior		0.084	-0.08	-0.959	0.338
Altruism		0.084	0.29	3.450*	< .001
Optimism		0.076	-0.20	-2.682*	0.008
Integrity		0.062	0.81	13.094*	< .001
R-squared			0.84		
Adjusted R-squared			0.84		
Standard Error of the Estimate			20.22		
F(5,394)				411*	< .001

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of parenting style in terms of democratic style on teenage positive behavior.

The F-test of the overall model is significant ($F(5,394) = 411, p < .001$), indicating that the regression model is a good fit for the data. The standard error of the estimate is 20.22, reflecting the average deviation between observed and predicted juvenile behavior.

This is supported by the study of Gove and Crutchfield (2020). characteristics of the parents' marriage play an important role for boys, while the misbehavior of girls is more strongly predicted by variables measuring parent-child interaction and parental control.

In a 2021 study, Schroeder explored the relationship between family formation (through marriage or cohabitation) and increased offending behavior. The findings revealed that forming a family is associated with simultaneous rises in

delinquent behavior, challenging the expectation that family establishment reduces offending.

Schroeder identified changes in family time and parental attachment as critical factors. Shifts in time spent with family and the quality of parental bonds significantly influence the likelihood of delinquent behavior during family formation. Additionally, prior parental attachment and juvenile offending history were found to condition this effect. Strong, pre-existing parental attachment can mitigate the risk of increased offending, whereas weak attachment or a history of delinquency can exacerbate it.

Moreover, Schroeder's study highlighted that the effects of these changes are not uniform and can be significantly conditioned by prior experiences of parental attachment and an individual's juvenile offending history. A strong pre-existing attachment to parents can serve as buffer, mitigating the risk of heightened offending behavior.

Table 15 Regression Analysis of the Juvenile Behavior as Predicted by Indulgent Parenting Style

Model	B	SE	β	t	P
Constant	0.66	0.1092		6.07	< .001
Empathy		0.0540	0.205	3.80*	< .001
Pro Social Behavior		0.0990	-0.212	-2.14*	0.033
Altruism		0.0996	0.341	3.42*	< .001
Optimism		0.0899	-0.228	-2.54*	0.011
Integrity		0.0725	0.748	10.31*	< .001
R-squared			0.76		
Adjusted R-squared			0.76		
Standard Error of the Estimate			28.15		
F(5,394)				254*	< .001

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of parenting style in terms of indulgent style on the juvenile behavior.

The regression model explains 76% of the variance in teenage positive behavior ($R\text{-squared} = 0.76$). Specifically, empathy ($\beta = 0.21, p < .001$), pro social behavior ($\beta = -0.21, p = .03$), altruism ($\beta = 0.34, p < .001$) optimism ($\beta = -0.228, p = .01$); and

integrity ($\beta = 0.75, p < .001$). The F-test of the overall model is significant ($F(5,394) = 411, p < .001$), indicating that the regression model is a good fit for the data. The standard error of the estimate is 28.15, reflecting the average deviation between observed and predicted juvenile behavior.



Table 16 Regression Analysis of the Juvenile Behavior as Predicted by Neglected Parenting Style

Model	B	SE	β	t	p
Constant	-0.79	0.1102		7.15	< .001
Empathy		0.0545	-0.261	4.78*	< .001
Pro Social Behavior		0.0999	-0.294	-2.94*	0.003
Altruism		0.1005	-0.263	2.61*	0.009
Optimism		0.0907	-0.177	-1.95	0.051
Integrity		0.0732	-0.780	10.66*	< .001
R-squared			0.75		
Adjusted R-squared			0.75		
Standard Error of the Estimate			28.64		
F(5,394)				240*	< .001

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of parenting style in terms of neglectful style (independent Variable) on teenage positive behavior (dependent variable). The regression model explains 75% of the variance in teenage positive behavior (R-squared = 0.75). Specifically, Empathy ($\beta = 0.26$, $p < .001$), Pro social behavior ($\beta = -0.29$, $p = .003$), altruism ($\beta = 0.26$, $p = .009$); and integrity

($\beta = 0.78$, $p < .001$). The F-test of the overall model is significant ($F(5,394) = 240$, $p < .001$), indicating that the regression model is a good fit for the data. The standard error of the estimate is 28.64, reflecting the average deviation between observed and predicted juvenile behavior.

Table 17 Regression Analysis of Juvenile Behavior as Predicted by Community Engagement

Model	B	SE	β	t	p
Constant	0.56	0.1101		5.12	< .001
Empathy		0.0544	0.193	3.55	< .001
Pro Social Behavior		0.0998	0.186	-1.86	0.063
Altruism		0.1004	0.190	1.89	0.059
Optimism		0.0906	0.109	-1.20	0.230
Integrity		0.0731	0.781	10.69	< .001
R-squared			0.77		
Adjusted R-squared			0.77		
Standard Error of the Estimate			28.59		
F(5,394)				261*	< .001

*p < 0.05

The table presents a multiple regression analysis examining the effect of social belongingness in terms of community engagement (independent Variable) on teenage positive behavior (dependent variable). The regression model explains 77% of the variance in teenage positive behavior (R-squared = 0.77). Specifically, empathy ($\beta = 0.19$, $p < .001$) and integrity

($\beta = 0.78$, $p < .001$). The F-test of the overall model is significant ($F(5,394) = 261$, $p < .001$), indicating that the regression model is a good fit for the data. The standard error of the estimate is 28.59, reflecting the average deviation between observed and predicted juvenile behavior.

Table 18 Regression Analysis of Juvenile Behavior as Predicted by Social Norms

Model	B	SE	β	t	p
Constant	0.05	0.41		0.111	0.911
Empathy		0.13	0.01	0.144	0.89
Pro Social Behavior		0.13	0.20	1.595	0.11
Altruism		0.13	0.03	0.269	0.79
Optimism		0.13	0.32	2.512*	0.01
Integrity		0.11	0.38	3.471*	< .001
R-squared			0.41		
Adjusted R-squared			0.39		
Standard Error of the Estimate			78.17		
F(5,394)				24.7*	< .001

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of social belongingness in terms of social norms (independent Variable) on juvenile behavior (dependent variable).

The regression model explains 41% of the variance in teenage positive behavior (R-squared = 0.41). Optimism ($\beta = 0.32$, $p = .01$); and Integrity ($\beta = 0.38$, $p < .001$). The F-test of the overall model is significant ($F(5,394) = 24.7$, $p < .001$), indicating that the regression model is a good fit for the data. The standard error of the estimate is 78.17, reflecting the average deviation between observed and predicted juvenile behavior.



Table 19 Regression Analysis of Juvenile Behavior as Predicted by Resilience

Model	B	SE	β	t	p
Constant	0.50	0.37		1.33	0.951
Empathy		0.12	0.01	0.06	0.25
Pro Social Behavior		0.11	0.13	1.16	0.08
Altruism		0.11	0.20	1.75	0.08
Optimism		0.11	0.14	1.29	0.20
Integrity		0.09	0.36	3.63*	< .001
R-squared			0.41		
Adjusted R-squared			0.39		
Standard Error of the Estimate			62.88		
F(5,394)				24.8*	< .001

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of social belongingness in terms of resilience to juvenile behavior.

The regression model explains 41% of the variance in teenage positive behavior (R-squared = 0.41). Specifically, integrity ($\beta = .36, p < .001$). The F- test of the overall model is significant

(F(5,394) = 36.5, $p < .001$), indicating that the regression model is a good fit for the data

The standard error of the estimate is 50.21, reflecting the average deviation between observed and predicted teenage positive behavior.

Table 20 Regression Analysis of the Juvenile Behavior as Predicted by Peer Relationship

Model	B	SE	β	t	p
Constant	0.32	0.33		0.978	0.329
Empathy		0.11	0.11	1.03	0.30
Pro Social Behavior		0.10	0.07	0.694	0.49
Altruism		0.10	0.02	0.269	0.79
Optimism		0.10	0.15	1.522	0.13
Integrity		0.08	0.54	6.075*	< .001
R-squared			0.50		
Adjusted R-squared			0.49		
Standard Error of the Estimate			50.21		
F(5,394)				36.5*	< .001

The table presents a multiple regression analysis examining the effect of social belongingness in terms of resilience (independent Variable) on teenage positive behavior (dependent variable). The regression model explains 50% of the variance in teenage positive behavior (R-squared = 0.50). Specifically, Integrity ($\beta = 6.075, p < .001$). The F-test of the overall model is significant (F(5,394) = 36.5, $p < .001$), indicating that the regression model is a good fit for the data. The standard error of the estimate is 50.21, reflecting the average deviation between observed and predicted teenage positive behavior.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings, the following were concluded:
 Based on the findings, it was concluded that parenting styles and social belongingness significantly affect juvenile behavior, thus rejecting both hypotheses. These results imply that interventions increase community engagement and that youth programs, mentoring, and neighborhood revitalization efforts, effectively reduce youth delinquent behavior. These interventions provide positive opportunities, social support, and prosocial role models, which can counteract risk factors for delinquency.

In light of conclusions drawn from the findings, the recommendations of the study were as follows:

1. Parent may critically analyze how the different parenting styles affect the development of their children’s behavior. Active involvement.
2. Juveniles may comprehend the significant effects of creating their individuality as much as surrounding themselves with good individuals for their welfare.
3. School officials and Local Government Unit officials may propose a sport and physical activity program to benefit the youth of their community/school.

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EXPLORING THE EFFICACY OF KINESTHETIC LEARNING STRATEGIES IN EARTH SCIENCE: AN INVESTIGATION OF STUDENT ENGAGEMENT, CONCEPTUAL MASTERY, LONG-TERM RETENTION AND STUDENTS' PERFORMANCE

Jessica G. Leonardo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study determined the efficacy of kinesthetic learning strategies in earth science: an investigation of student engagement, conceptual mastery, and long-term retention. Specifically, this study answered the following questions: The level of the efficacy of kinesthetic learning strategies in earth science. The level of student engagement in kinesthetic learning strategies in earth science. The level of conceptual mastery in kinesthetic learning strategies in earth science. The level of long-term retention in kinesthetic learning strategies in earth science. The students' performance in terms of diagnostic test and summative test. The utilization of kinesthetic learning strategies in earth science has significant difference on the diagnostic and summative of the student. The utilization of kinesthetic learning strategies in earth science has significant effect on the student engagement. The utilization of kinesthetic learning strategies in earth science has significant effect on the conceptual mastery. The utilization of kinesthetic learning strategies in earth science has significant effect on the long-term retention.

The study used a descriptive design in comparing variables, since the researcher's only concern is providing a description of the circumstance or case they are studying. The study was conducted to prove that kinesthetic learning strategies in earth science has significant effect on the student engagement, conceptual mastery and long-term retention. Also, to determine that kinesthetic learning strategies has significant difference on the diagnostic and summative of the students.

The respondents of the study were composed of thirty-three and thirty-seven Grade eight students from Santa Cruz Integrated National High School. In this study, purposive sampling method was used in choosing the respondents. The researcher made questionnaires validated by the set of expertise who are not part of the respondents from the schools in the District of Santa Cruz, Schools Division of Laguna.

Based on the data presented and interpreted in Chapter 4, For the level of efficacy of kinesthetic learning strategies in earth science in terms of simulation, hands-on activities, interactive presentations and movement-based exercises all was interpreted to a very great extent. While for level of efficacy of student engagement in terms of behavioral engagement, cognitive engagement and emotional engagement all was interpreted to a very great extent. For the level of efficacy of level of students' conceptual mastery in kinesthetic learning strategies in earth science in terms of immediate understanding and depth understanding was both interpreted to a very great extent. For the level of efficacy of students' long-term retention in earth science in terms of knowledge retention, transfer of learning and practical application was all interpreted to a very great extent. The students' performance in terms of diagnostic and summative test, it is evident that the students' performance in summative test is high, furthermore their performance in diagnostic test is evidently low. It only implies that they performed higher after the used of kinesthetic learning strategies. For the test of difference between the performance in utilization of kinesthetic learning strategies in earth science. Data obtained through a paired t-test indicated that the increase in the scores in performance is significant. For the effect of utilization of kinesthetic learning strategies in earth science on the student engagement. The Simulations, Hands-on Activities, Interactive Presentations and Movement-based Exercises of kinesthetic learning strategies in earth science has a significant effect to the student's motivation. Students' motivation is greatly impacted by their Immediate and Depth Understanding of kinesthetics learning strategies in Earth Science. For the effect of utilization of kinesthetic learning strategies in earth science on the long-term retention.

Based on the findings, the following were conclusions derived from the data and results of the study presented, analyzed, and interpreted: (1) Kinesthetic learning strategies in earth science has significant difference on the diagnostic and summative of the students, rejecting the first null hypothesis; (2) Kinesthetic learning strategies in earth science has significant effect on the student engagement thus, rejecting the second null hypothesis; (3) Kinesthetic learning strategies in earth science has significant effect on the conceptual mastery, rejecting the third null hypothesis; and (4) Kinesthetic learning strategies in earth science has significant effect on the long-term retention, rejecting the last null hypothesis. Hence, the utilization of kinesthetic learning strategies in earth science was effective.

Based on the conclusions formulated from the findings, the following recommendations were given. Maintain a multisensory approach by combining visual, auditory, and tactile elements in all kinesthetic learning strategies to check if it enhances comprehension, retention, and enjoyment of learning. Incorporate regular feedback mechanisms and reflection opportunities for students to assess their progress, identify areas for improvement, and reinforce learning outcomes.

KEYWORDS: efficacy; kinesthetic learning strategies; earth science

1. INTRODUCTION

From the famous quote by Nelson Mandela, "The most powerful weapon you can use to change the world is education." Every country needs to have a solid educational foundation in order to keep up with scientific and technological breakthroughs. Because of this, countries put a lot of effort into enhancing their educational frameworks and implementing

innovative, effective teaching methods. Some children find it easy to concentrate and stay in class for long stretches of time. However, many children also find it difficult to learn by the traditional approach of listening and making notes. Students may find themselves distracted by their friends, social media, homework, jobs, or even by simply dozing off in class (Gashgari, 2017).



In the dynamic field of education, pedagogical approaches are constantly being evaluated and refined to enhance the educational experience for students. This study explores the effectiveness of kinesthetic learning strategies and how they affect students' engagement, conceptual understanding, and long-term memory. It takes readers on an engaging journey through the realm of earth science teaching. As academics and educators explore for new approaches to bridge the gap between theory and practice, kinesthetic learning methodologies are emerging as a viable route for building a closer connection between students and the intricate laws of science.

A look into kinesthetic learning, which integrates academic material with physical movement and sensory experiences, is warranted by the distinct nature of earth science and calls for an approach that goes beyond conventional teaching approaches. The goal of this research is to better understand the possible long-term benefits of kinesthetic learning tactics through long-term information retention, in addition to examining the immediate effects of these strategies on student engagement and conceptual understanding.

The study endeavors to provide significant contributions to the field of education by elucidating the complex interplay between kinesthetic learning methodologies and the diverse facets of earth science, as we commence this extensive inquiry. We hope to give educators evidence-based advice to improve their educational approaches and enable students to master science fundamentals by exploring the relationship between physical activity, cognitive processes, and knowledge retention. Our goal in conducting this study is to change the way earth science is taught, creating an atmosphere that makes learning interesting and memorable.

1.1 Statement of the Problem

Specifically, this study answers the following questions:

1. What is the level of the efficacy of kinesthetic learning strategies in earth science in terms of:
 - 1.1 Simulations;
 - 1.2 Hands-on Activities;
 - 1.3 Interactive Presentations; and
 - 1.4 Movement-based Exercises?
2. What is the level of student engagement in earth science in terms of:
 - 2.1. Behavioral engagement;
 - 2.2. Emotional engagement; and
 - 2.3. Cognitive Engagement?
3. What is the level of students' conceptual mastery in terms of:
 - 3.1. Immediate understanding; and
 - 3.2. Depth understanding?
4. What is the level of students' long-term retention in terms of:
 - 4.1. knowledge retention;
 - 4.2. transfer of learning; and
 - 4.3. practical application
5. What is the students' performance in terms of:
 - 5.1. Diagnostic Test;

5.2. Summative Test?

6. Does the utilization of kinesthetic learning strategies in earth science have significant difference on the Diagnostic and Summative Test of the students?

7. Does the utilization of kinesthetic learning strategies in earth science have significant effect on the student engagement?

8. Does the utilization of kinesthetic learning strategies in earth science have significant effect on the conceptual mastery?

9. Does the utilization of kinesthetic learning strategies in earth science have significant effect on the long-term retention?

2. METHODOLOGY

The study used a descriptive design in comparing variables, since the researcher's only concern is providing a description of the circumstance or case they are studying. It is a theory-based design process that was developed through data collection, analysis, and presentation. This enables a researcher to explain the how and why of their work. This is to determine the efficacy of kinesthetic learning strategies in earth science: a comprehensive investigation of student engagement, conceptual mastery, and long-term retention. Descriptive research, according to Rillo and Alieto (2018), is a purposeful process of collecting, evaluating, categorizing, and tabulating data about current conditions, practices, procedures, trends, and cause-and-effect relationships, followed by providing an adequate and accurate interpretation of the data—with, without, or with the occasional minimal assistance from statistical methods.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions will further characterize the efficacy of kinesthetic learning strategies in earth science through a comprehensive investigation of student engagement, conceptual mastery, and long-term retention.

Level of the Efficacy of Kinesthetic Learning Strategies in Earth Science

Tables 1 to 5 presents the level of efficacy of kinesthetic learning strategies in Earth Science in terms of simulations, hands-on activities, interactive presentations and movement-based exercises.

Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Simulation

Table 1 below illustrates the level of efficacy of kinesthetic learning strategies in earth science in terms of Simulations. Students strongly agree that using kinesthetic learning strategies in earth science particularly through simulation, enhance their understanding ($M=4.76, SD=0.46$). Furthermore, they believe that this strategy adequately provides them with knowledge ($M=4.41, SD=0.63$). The level of efficacy of kinesthetic learning strategies in earth science in terms of Simulations attained a weighted mean score of 4.53 and a standard deviation of 0.31 and was Very Great Extent among



the respondents.

This means that the efficacy of kinesthetic learning strategies is evident during simulation, in teaching and learning earth science. Since engaging students through physical movement and hands-on experiences boosts their participation and

comprehension of the concepts. Integrating visual, auditory, and tactile elements enriches the learning experience, allowing students to apply theoretical knowledge in practical scenarios. This active engagement improves their retention and makes learning more enjoyable.

Table 1. Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Simulations

STATEMENTS	MEAN	SD	REMARKS
1. Kinesthetic learning strategies in Earth Science, mainly through simulations, enhance students' understanding.	4.76	0.46	Strongly Agree
2. The efficacy of kinesthetic learning strategies in Earth Science using simulations is apparent in students' increased engagement and retention.	4.44	0.56	Strongly Agree
3. Including kinesthetic elements, such as simulations, greatly boosts the efficacy of Earth Science learning by providing a hands-on experience.	4.54	0.58	Strongly Agree
4. The efficacy of kinesthetic learning strategies, especially when employing Earth Science simulations, will provide enough knowledge.	4.41	0.63	Strongly Agree
5. The use of kinesthetic learning, mainly through simulation-based activities, is a powerful tool in improving the overall effectiveness of Earth Science.	4.51	0.74	Strongly Agree
Weighted Mean		4.53	
SD		0.31	
Verbal Interpretation			Very Great Extent

Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Hands-on Activities

Table 2. Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Hands-on Activities

STATEMENTS	MEAN	SD	REMARKS
1. Incorporating kinesthetic learning strategies in Earth Science, mainly through hands-on activities, significantly enhances students' comprehension.	4.66	0.51	Strongly Agree
2. The efficacy of kinesthetic learning in Earth Science is evident when students engage in hands-on activities, fostering a deeper understanding of theoretical concepts.	4.44	0.58	Strongly Agree
3. Hands-on activities in Earth Science, as part of kinesthetic learning strategies, effectively bridge the gap between theory and practical application.	4.60	0.60	Strongly Agree
4. The efficacy of kinesthetic learning strategies, particularly those involving hands-on earth science activities, has a positive impact on student learning outcomes.	4.53	0.61	Strongly Agree
5. Kinesthetic learning strategies play a crucial role in improving the overall efficacy of earth science.	4.61	0.55	Strongly Agree
Weighted Mean		4.57	
SD		0.26	
Verbal Interpretation			Very Great Extent

The efficacy of kinesthetic learning strategies in earth science is demonstrated by Table 2 above in terms of hands-on activities.

It is strongly agreed upon by students that kinesthetic learning strategies, especially through hands-on activities, improve their comprehension in earth science (M=4.66, SD=0.51). Moreover, they think that this approach effectively promotes a deeper comprehension of theoretical ideas (M=4.44, SD=0.58). With a weighted mean score of 4.57 and a standard deviation of 0.26, the respondents' level of efficacy for kinesthetic learning strategies in earth science in terms of hands-on activities was to

Very Great Extent.

This simply indicates that the efficacy of kinesthetic learning strategies is evident when teaching and learning earth science through hands-on activities. Allowing them to interact with objects, models, and experiments, making abstract concepts easier to comprehend. This hands-on approach improves retention rates by encouraging active participation. In addition, it promotes critical thinking, observation skills, data analysis, and drawing conclusions, while also enhancing social interaction and collaborative skills.



Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Interactive Presentations

The efficacy of kinesthetic learning strategies in earth science is demonstrated by Table 3 below in terms of interactive presentations.

It can be seen that the efficacy of kinesthetic learning strategies is evident through interactive presentations. Students strongly agreed that interactive presentations make earth science more

accessible and memorable for them (M=4.66, SD=0.56). Also, its positive impact is clear, which aligns to enhance the overall teaching of earth science (M=4.38, SD=0.60) was strongly agreed upon by the students. The weighted mean score of 4.54, along with a standard deviation of 0.53, indicates that the respondents found kinesthetic learning methodologies to be very effective in earth science as it can be interpreted as to very great extent.

Table 3. Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Interactive Presentations

STATEMENTS	MEAN	SD	REMARKS
1. The efficacy of kinesthetic learning in earth science is particularly notable when presented interactively, as it caters to diverse learning styles and encourages active participation.	4.66	0.59	Strongly Agree
2. Integrating kinesthetic learning strategies in earth science through interactive presentations enhances student engagement and understanding.	4.46	0.61	Strongly Agree
3. Interactive presentations within kinesthetic learning strategies effectively reinforce earth science concepts, making the subject more accessible and memorable for students.	4.66	0.56	Strongly Agree
4. The positive impact of interactive presentations in kinesthetic learning strategies is clear, aligning to enhance the overall efficacy of earth science.	4.38	0.60	Strongly Agree
5. The interactive nature of presentations within kinesthetic learning encourages students to explore and apply earth science concepts actively.	4.53	0.72	Strongly Agree
Weighted Mean		4.54	
SD		0.53	
Verbal Interpretation		Very Great Extent	

This only shows that when teaching and learning earth science through interactive presentations, the effectiveness of kinesthetic learning methodologies is clear. Because it shows that students are more engaged and involved in their learning when they participate in interactive presentations. This not only helps them understand the subject better but also allows for immediate feedback to reinforce their learning. Preparing these presentations to each student's individual learning style can increase their motivation and enjoyment of learning by

prompting critical thinking, analysis of the material, and establishing connections between different ideas.

Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Hands-on Movement Based Exercises

The efficacy of kinesthetic learning strategies in earth science is demonstrated by Table 4 below in terms of movement-based exercises.

Table 4. Level of Efficacy of Kinesthetic Learning Strategies in Earth Science in terms of Movement-based Exercises

STATEMENTS	MEAN	SD	REMARKS
1. Combining kinesthetic learning strategies and movement-based exercises is a powerful approach to making earth science more enjoyable and effective.	4.60	0.60	Strongly Agree
2. The positive impact on student comprehension and retention is notable, making it easy to agree on the efficacy of incorporating movement-based exercises in earth science.	4.63	0.59	Strongly Agree
3. Movement-based exercises within kinesthetic learning strategies contribute to improved retention of earth science concepts by allowing students to interact with the material physically.	4.44	0.58	Strongly Agree
4. The efficacy of kinesthetic learning in earth science is evident when movement-based exercises are integrated, fostering a more dynamic and immersive learning experience.	4.47	0.70	Strongly Agree
5. Merging movement-based exercises within kinesthetic	4.50	0.61	Strongly Agree



learning strategies in earth science enhances student engagement and understanding.

Weighted Mean

SD

Verbal Interpretation

4.53

0.32

Very Great Extent

Based on the table students strongly agreed that incorporating movement-based exercise in teaching and learning earth science have positive impact on their comprehension and retention ($M=4.63, SD=0.59$). Moreover, they also strongly agreed that this kinesthetic learning strategy can contribute in improving their retention by allowing them to interact with the material physically ($M=4.44, SD=0.58$).

The weighted mean score of 4.53, accompanied by a 0.52 standard deviation, suggested that the participants highly valued kinesthetic learning approaches in the field of earth science.

This merely demonstrates how effective kinesthetic learning approaches are for teaching and learning earth science through movement-based exercises. This interactive method helps students see and comprehend difficult ideas. It lets them

actively engage with the material, making the learning experience more engaging and memorable. By immersing students in the subject matter, their ability to observe and analyze was improved. These hands-on activities cater to different learning preferences and promote active participation.

Level of Student Engagement in Kinesthetic Learning Strategies in Earth Science

Tables 5 to 7 presents the level of students' engagement in earth science in terms of behavioral engagement, emotional engagement and cognitive engagement.

Level of Student Engagement in Earth Science in terms of Behavioral Engagement

Table 5 below illustrates the level of student engagement in earth science in terms of behavioral engagement.

Table 5. Level of Student Engagement in Earth Science in Terms of Behavioral Engagement

STATEMENTS	MEAN	SD	REMARKS
1. Kinesthetic learning strategies in earth science significantly enhance student behavioral engagement by promoting active participation.	4.61	0.62	Strongly Agree
2. Using kinesthetic learning strategies in earth science encourages behavioral engagement by providing students with physical interactions that make the subject more tangible.	4.53	0.53	Strongly Agree
3. Kinesthetic Learning Strategies contribute to a livelier classroom atmosphere, fostering behavioral engagement.	4.47	0.76	Strongly Agree
4. The hands-on nature of kinesthetic learning strategies naturally aligns with increased behavioral engagement, ensuring students actively participate in the learning process.	4.49	0.58	Strongly Agree
5. Incorporating kinesthetic elements in earth science education enhances behavioral engagement, making the subject more exciting and accessible to students.	4.67	0.50	Strongly Agree

Weighted Mean

SD

Verbal Interpretation

4.55

0.32

Very Great Extent

It can be seen from the table that students strongly agreed that kinesthetic learning strategies enhances their behavioral engagement, making the subject more exciting and accessible to them ($M=4.67, SD=0.50$). On the other hand, they also strongly agreed that it contributes to a livelier classroom atmosphere, fostering behavioral engagement ($M=4.47, SD=0.76$). The level of student engagement in kinesthetic learning strategies in earth science in terms of behavioral engagement attained a weighted mean score of 4.55 and a standard deviation of 0.32 and was Very Great Extent among the respondents.

It only means that the students showed a high level of behavioral engagement in earth science, as reported by the respondents based on their behavioral engagement. It doesn't only draw them in but also encourages their active participation, more likely making them fully engage in the learning process. This hands-on approach results in better retention of knowledge, deeper understanding of concepts, and improved learning outcomes overall.

Level of Student Engagement in Earth Science in terms of Emotional Engagement

The level of emotional engagement among students in earth science was shown in Table 6 below.



Table 6. Level of Student Engagement in Earth Science in Terms of Emotional Engagement

STATEMENTS	MEAN	SD	REMARKS
1. Kinesthetic strategies create a positive emotional connection with earth science, fostering a more favorable attitude towards the subject.	4.66	0.59	Strongly Agree
2. The hands-on nature of kinesthetic learning strategies naturally promotes emotional engagement, making the learning experience more enjoyable and memorable for students.	4.51	0.63	Strongly Agree
3. Incorporating kinesthetic learning strategies in earth science sparks emotional engagement by tapping into students' intrinsic curiosity and interest.	4.47	0.70	Strongly Agree
4. The efficacy of kinesthetic learning is evident in its positive impact on emotional engagement, as students connect with the subject on a deeper, more personal level.	4.51	0.61	Strongly Agree
5. Incorporation of kinesthetic elements in earth science education enhances emotional engagement, creating a more positive and impactful learning environment.	4.40	0.71	Strongly Agree
Weighted Mean		4.51	
SD		0.32	
Verbal Interpretation			Very Great Extent

Based on the table above, positive emotional connection with earth science fosters a more favorable attitude towards it (M=4.66, SD=0.59), since the students strongly agreed upon this statement. Moreover, students also strongly agreed that the enhance emotional engagement they've experienced, creates more positive and impactful learning environment (M=4.40, SD=0.71). With a weighted mean score of 4.51 and a standard deviation of 0.32, the respondents' level of students' engagement in kinesthetic learning strategies in earth science in terms of emotional engagement was to Very Great Extent.

It only suggests that the respondents showed a high level of emotional engagement in earth science, as reported by the respondents. Not only does a strong emotional engagement enhance students' academic performance, but it also nurtures a lasting curiosity in the subject, sharpens their analytical skills, fosters environmental awareness, and ultimately, makes the learning experience more enjoyable and fulfilling for them.

Level of Student Engagement in Earth Science in terms of Cognitive Engagement

The students' engagement in earth science is demonstrated by Table 7 below in terms of cognitive engagement.

Respondents strongly agreed that cognitive engagement allows students to explore earth science concepts actively (M=4.74, SD=0.47). Also, based on the table below, that experiential learning opportunities can stimulate cognitive engagement (M=4.47, SD=0.65) since most of the respondents strongly agreed on this statement. The weighted mean score of 4.58, accompanied by a 0.31 standard deviation, suggested that the participants are highly engaged in kinesthetic learning approaches in the field of earth science as it can be interpreted as to very great extent.

This merely demonstrates how they are engaged cognitively in learning earth science. Since they use critical thinking skills and problem-solving strategies to deeply understand and connect concepts. Which leads to a more thorough comprehension of the subject. They ask questions, seek answers through research, and develop a scientific mindset, by grasping not only the facts but also the underlying principles and connections between different aspects of the subject, students gain a deeper understanding of earth science. They can apply their skills and knowledge in new situations, which promotes creativity and innovation.

Table 7. Level of Student Engagement in Earth Science in Terms of Cognitive Engagement

STATEMENTS	MEAN	SD	REMARKS
1. Integrating kinesthetic elements in earth science promotes cognitive engagement, making learning more intellectually stimulating for students.	4.59	0.58	Strongly Agree
2. The interactive aspect of kinesthetic learning strategies encourages cognitive engagement, allowing students to explore earth science concepts actively.	4.74	0.47	Strongly Agree
3. The hands-on nature of kinesthetic learning strategies naturally aligns with enhanced cognitive engagement, fostering critical thinking and analytical skills.	4.49	0.63	Strongly Agree
4. Kinesthetic strategies increase cognitive engagement, helping students better understand earth science concepts.	4.59	0.60	Strongly Agree
5. Using kinesthetic learning strategies in earth science	4.47	0.65	Strongly Agree



stimulates cognitive engagement by providing students with experiential learning opportunities.

Weighted Mean	4.58
SD	0.31
Verbal Interpretation	Very Great Extent

Level of Students’ Conceptual Mastery in Earth Science

Tables 8 to 9 presents the level of students’ conceptual mastery in kinesthetic learning strategies in earth science in terms of immediate understanding and depth understanding.

Level of Students’ Conceptual Mastery in Earth Science in terms of Immediate Understanding

Table 8 below illustrates the level of students’ conceptual mastery in earth science in terms of immediate understanding.

Table 8. Level of Students’ Conceptual Mastery in Earth Science in terms of Immediate Understanding

STATEMENTS	MEAN	SD	REMARKS
<i>1. The interactive aspect of kinesthetic learning strategies facilitates immediate understanding, allowing students to see and experience earth science concepts.</i>	4.67	0.50	Strongly Agree
<i>2. Incorporating kinesthetic elements in earth science accelerates conceptual mastery, providing students with a direct and immediate understanding of theoretical ideas.</i>	4.41	0.60	Strongly Agree
<i>3. Using kinesthetic learning strategies in earth science promotes immediate understanding by translating abstract concepts into hands-on, practical applications.</i>	4.54	0.50	Strongly Agree
<i>4. Using kinesthetic learning strategies in earth science promotes immediate understanding by translating abstract concepts into hands-on, practical applications.</i>	4.47	0.68	Strongly Agree
<i>5. Kinesthetic strategies contribute to immediate conceptual mastery, helping students connect theory to real-world scenarios seamlessly.</i>	4.47	0.68	Strongly Agree
Weighted Mean		4.51	
SD		0.30	
Verbal Interpretation		Very Great Extent	

From the table, it can be seen that the respondents strongly agreed that the immediate understanding allows students to see and experience earth science concepts (M=4.67, SD=0.50). Also, the strategies used in teaching and learning earth science accelerates their conceptual mastery, providing them with a direct and immediate understanding of theoretical idea, since most of the respondents strongly agreed on this part. The level of conceptual mastery in kinesthetic learning strategies in earth science in terms of immediate understanding attained a weighted mean score of 4.51 and a standard deviation of 0.30 and was Very Great Extent among the respondents.

It only means that the students showed a high level of mastery in earth science, as reported by the respondents based on their immediate understanding. Which allows them to easily and

efficiently learn new ideas, as they grasp concepts rapidly by making connections between different concepts, recognizing patterns, and applying their existing knowledge to new scenarios. Those who quickly understand the material are more likely to engage in group activities, share insights, and ask insightful questions, creating a more enriched learning environment. Additionally, this immediate understanding enhances their long-term memory, laying a solid foundation for future educational pursuits and academic achievements.

Level of Students’ Conceptual Mastery in Earth Science in terms of Depth Understanding

The students’ conceptual mastery level in earth science in terms of depth understanding is shown in Table 9 below.

Table 9. Level of Conceptual Mastery in Earth Science in terms of Depth Understanding

STATEMENTS	MEAN	SD	REMARKS
<i>1. The efficacy of kinesthetic learning is evident in its positive impact on conceptual mastery, as it promotes a deeper understanding of earth science principles.</i>	4.77	0.42	Strongly Agree
<i>2. Using kinesthetic learning strategies in earth science encourages a depth of understanding by engaging students in hands-on experiences that reinforce theoretical knowledge.</i>	4.51	0.53	Strongly Agree
<i>3. Kinesthetic learning strategies in earth science foster a depth of understanding, allowing students to comprehend</i>	4.44	0.63	Strongly Agree



and appreciate concepts at a profound level.

4. Kinesthetic strategies contribute to a depth of conceptual mastery, enabling students to explore the intricacies of earth science concepts thoroughly.

4.39 0.73 Strongly Agree

5. Putting kinesthetic elements in earth science accelerates a depth of conceptual mastery, providing students with opportunities for profound insights.

4.46 0.63 Strongly Agree

Weighted Mean

4.52

SD

0.29

Verbal Interpretation

Very Great Extent

Students strongly agreed that the efficacy of kinesthetic learning is evident in its positive impact on their conceptual mastery, as it promotes a deeper understanding of earth science principles (M=4.77, SD=0.42). Furthermore, depth conceptual mastery, enables students to explore the intricacies of earth science thoroughly (M=4.39, SD=0.73), showing a Strongly Agree response. With a weighted mean score of 4.52 and a standard deviation of 0.29, the respondents' level of conceptual mastery in kinesthetic learning strategies in earth science in terms of depth understanding was to Very Great Extent.

It only suggests that the respondents showed a high level of conceptual mastery in earth science in terms of depth understanding, as reported by the respondents. Students who have a deep understanding of concepts in earth science are able to tackle complex topics. This helps improve their critical thinking skills and allows them to apply their academic

knowledge effectively to real-life situations. It also enables them to integrate their knowledge with insights from other areas, prompting more innovative thinking. As a result, students become better at communicating ideas and are adept at identifying key challenges in the field.

Level of Students' Long-Term Retention in Earth Science

Tables 10 to 12 presents the level of students' long-term retention in earth science in terms of knowledge retention, transfer of learning and practical application.

Level of Students' Long-Term Retention in Earth Science in terms of Knowledge Retention

The students' long-term retention in earth science is demonstrated by Table 10 below in terms of knowledge retention.

Table 10. Level of Long-Term Retention in Earth Science in Terms of Knowledge Retention

STATEMENTS	MEAN	SD	REMARKS
1. Kinesthetic learning strategies in earth science contribute to long-term retention, ensuring that students retain knowledge well beyond the initial learning period.	4.57	0.67	Strongly Agree
2. The effectiveness of kinesthetic learning is evident in its positive impact on long-term knowledge retention, as hands-on experiences create lasting memories of earth science concepts.	4.50	0.61	Strongly Agree
3. Applying kinesthetic learning strategies in earth science promotes enduring knowledge retention by engaging students in practical applications of theoretical principles.	4.50	0.68	Strongly Agree
4. The interactive aspect of kinesthetic learning strategies facilitates long-term knowledge retention, allowing students to build a solid and enduring understanding of earth science.	4.67	0.47	Strongly Agree
5. Kinesthetic learning strategies in earth science are effective in helping students retain and apply knowledge well into the future.	4.64	0.57	Strongly Agree
Weighted Mean		4.58	
SD		0.33	
Verbal Interpretation		Very Great Extent	

Based on the table above the respondents strongly agreed that the long-term knowledge retention allows students to build a solid and enduring understanding of earth science (M=4.67, SD=0.47). Nonetheless, they strongly agreed that engaging students in practical applications of theoretical principles promotes enduring knowledge retention (M=4.50, SD=0.68). The weighted mean score of 4.58, accompanied by a 0.33 standard deviation, suggested that the participants have long term retention in kinesthetic learning approaches in the field of

earth science as it can be interpreted as to very great extent.

This merely demonstrates how the knowledge retention in kinesthetic learning approaches in learning earth science is evident. This forms a strong foundation for further exploration and study of earth science. It also encourages a mindset of continual learning and enhances critical thinking skills. Retaining this knowledge is advantageous for career advancement in earth science-related fields and enhances



problem-solving abilities within the industry. Additionally, students who persist in studying earth science are more likely to have a deep understanding of environmental issues

Level of Students' Long-Term Retention in Earth Science in terms of Transfer of Learning

The level of long-term retention among students in earth science in terms of transfer of learning was shown in Table 11 below.

The respondents strongly agree that kinesthetic learning strategies are effective in helping students retain and apply

knowledge in practical, real-world settings (M=4.63, SD=0.59). However, based on the results presented respondents also strongly agreed that not only it supports long – term retention but also strengthens the transfer of learning, ensuring students can apply their understanding in various situations (M=4.44, SD=0.65).

With a weighted mean score of 4.51 and a standard deviation of 0.31, the respondents' level of long-term retention in kinesthetic learning strategies in earth science in terms of transfer of learning was to Very Great Extent.

Table 11. Level of Students' Long-Term Retention in Earth Science in Terms of Transfer of Learning

STATEMENTS	MEAN	SD	REMARKS
1. Kinesthetic learning strategies in earth science are effective in helping students retain and apply knowledge in practical, real-world settings.	4.63	0.57	Strongly Agree
2. Incorporation of kinesthetic activities in earth science education supports long-term retention and strengthens the transfer of learning, ensuring students can apply their understanding in various situations.	4.44	0.65	Strongly Agree
3. The interactive aspect of kinesthetic learning strategies facilitates long-term retention and enhances the transfer of learning, empowering students to apply theoretical knowledge beyond the classroom.	4.44	0.61	Strongly Agree
4. Integrating kinesthetic elements in earth science has a lasting impact on knowledge retention and supports the effective transfer of learning to real-world scenarios.	4.51	0.58	Strongly Agree
5. Kinesthetic learning strategies in earth science support the transfer of learning across various problem-solving scenarios.	4.51	0.74	Strongly Agree
Weighted Mean		4.51	
SD		0.31	
Verbal Interpretation			Very Great Extent

It only suggests that the respondents showed a high level of long term-retention as to transfer of learning in earth science, as reported by the respondents. The transfer of learning enables the students to use their knowledge of earth science in different areas and real-life scenarios. Applying what they have learned makes it simpler to solve problems in various settings. This supports progression in earth science and continuous learning.

Many job opportunities in earth science and related fields are available because of applying what they have learned.

Level of Students' Long-Term Retention in Earth Science in terms of Practical Application

Table 12 below illustrates the level of students' long-term retention in earth science in terms of practical application.

Table 12. Level of Students' Long-Term Retention in Earth Science in Terms of Practical Application

STATEMENTS	MEAN	SD	REMARKS
1. The efficacy of kinesthetic learning is evident in its positive impact on long-term knowledge retention, enabling students to apply earth science concepts in real-world situations.	4.70	0.55	Strongly Agree
2. Kinesthetic learning strategies in earth science enhance long-term retention by fostering practical application of theoretical knowledge.	4.44	0.71	Strongly Agree
3. Using kinesthetic learning strategies in earth science promotes enduring knowledge retention, supporting students in applying learned principles practically.	4.54	0.56	Strongly Agree
4. Integrating kinesthetic elements in earth science contributes to lasting knowledge retention and empowers students to apply learned concepts practically.	4.47	0.65	Strongly Agree
5. Incorporating kinesthetic activities in earth science supports long-term retention and strengthens practical	4.54	0.65	Strongly Agree



application, ensuring students can confidently apply their understanding in realistic settings.

Weighted Mean

4.54

SD

0.33

Verbal Interpretation

Very Great Extent

The results proved that the impact of kinesthetic learning strategies on the students' long-term retention, enables them to apply earth science concepts in real world situations ($M=4.70$, $SD=0.55$) by strongly agreeing on the statement. On the other hand, their long – term retention can be enhanced by fostering practical applications of theoretical knowledge since they strongly agree on the statement ($M=4.44$, $SD=0.71$). The level of students' long-term retention in earth science in terms of practical application attained a weighted mean score of 4.54 and a standard deviation of 0.33 and was Very Great Extent among the respondents.

It only means that the students showed a high level of long-term retention in earth science, as reported by the respondents based on their practical application. Having a positive effect on long-

term memory, helps students use earth science concepts in real-life scenarios through practical application of theoretical knowledge. It also encourages lasting memory retention, assisting students in utilizing principles they have learned and empowering students to confidently apply their understanding of concepts learned.

Students Performance in terms of Diagnostic and Summative Test

Table 13 verifies the students' performance in terms of diagnostic and summative test.

Based on the table below it is evident that the students' performance in summative test is High ($M=37.51$), furthermore their performance in diagnostic test is evidently Low ($M=13.19$).

Table 13. Students' Performance in Terms of Diagnostic and Summative Test

Kinesthetic Learning Strategies	Diagnostic test		Summative test	
	Mn	SD	Mn	SD
<i>performance</i>	13.19	6.70	37.51	5.47

Legend: Rating Scale

- 41.00 – 50.00 - Very High (VH)
- 31.00 – 40.00 - High (H)
- 21.00 – 30.00 - Moderate (M)
- 11.00 – 20.00 - Low (L)
- 1.00 – 10.00 - Very Low (VL)

It only implies that they performed higher after the used of kinesthetic learning strategies. Since on the previous discussion of the findings, the strategies can enhance their learning experience by helping them better retain information. By connecting concepts with physical movements, students can gain a deeper understanding of the material and improve their analytical skills. This active approach to learning can also boost motivation and foster a sense of collaboration and community among students.

Test of Difference on the Students' Performance in in Diagnostic and Summative Test

Revealed in Table 14 is the test of difference between the performance in utilization of kinesthetic learning strategies in earth science. Data obtained through a paired t-test indicated that the increase in the scores in *performance* is significant ($p < 0.05$).

Table 14. Test of Difference on the Students' Performance in in Diagnostic and Summative Test

kinesthetic learning strategies	Diagnostic test		Summative test		Mean Difference	95% Confidence Interval of Difference		t	df	Sig (2-tailed)
	Mn	SD	Mn	SD		L	U			

Legend: *Significant at 0.05

This implies that the students performed better after the utilization of kinesthetic learning strategies. Their level of students learning strategies has significantly improved from low to high. The study showed that using kinesthetic learning techniques helped students improve their performance. These techniques not only help with retaining information but also enhance comprehension and analytical skills by connecting concepts with physical movements.

Significant Effect of Utilization of Kinesthetic Learning Strategies in Earth Science on the Student Engagement

Table 15 presents the results of a multiple regression analysis examining the effect of utilization of kinesthetic learning strategies in earth science on the student engagement.



Table 15. Regression Analysis of The Utilization of Kinesthetic Learning Strategies in Earth Science on The Student Engagement

Behavioral engagement	B	SE	β	t	p
Constant	.927	0.564		1.642	0.105
<i>Simulations</i>		0.149	0.376	2.514*	0.014
<i>Hands-on Activities</i>		0.151	0.146	0.964	0.339
<i>Interactive Presentations</i>		0.132	0.147	1.113	0.27
<i>Movement-based Exercises</i>		0.133	0.13	0.98	0.33
R-squared			.432		
Adjusted R-squared			.397		
Standard Error of the Estimate		.247			
F(4, 65)				12.34	.000
Emotional engagement	B	SE	β	t	p
Constant	1.149	0.588		1.955	0.055
<i>Simulations</i>		0.156	0.188	1.206	0.232
<i>Hands-on Activities</i>		0.158	0.056	0.356	0.723
<i>Interactive Presentations</i>		0.138	0.208	1.51	0.136
<i>Movement-based Exercises</i>		0.138	0.29	2.096*	0.04
R-squared			.394		
Adjusted R-squared			.356		
Standard Error of the Estimate		.257			
F(4, 65)				10.55	.000
Cognitive Engagement	B	SE	β	t	p
Constant	1.401	0.552		2.536*	0.014
<i>Simulations</i>		0.146	0.309	2.115*	0.038
<i>Hands-on Activities</i>		0.148	-0.033	-0.226	0.822
<i>Interactive Presentations</i>		0.129	0.187	1.444	0.154
<i>Movement-based Exercises</i>		0.13	0.238	1.834	0.071
R-squared			.418		
Adjusted R-squared			.382		
Standard Error of the Estimate		.242			
F(4, 65)				11.67	.000

*p < 0.05

Based on the data above it can be seen that the effect of doing simulations on the students' behavioral and cognitive engagement is evident ($p=0.014$ and 0.038), furthermore, the effect of movement-based exercise on the students' emotional and cognitive engagement is also evident ($p=0.04$ and 0.071). As explained simulations offer a lifelike and engaging setting for students to delve into concepts. Incorporating physical movements like gestures, demos, or activities can boost engagement for kinesthetic learners. By utilizing these methods, teachers can establish an interactive learning atmosphere that accommodates various learning preferences and promotes participation, ultimately enhancing learning results. Adding some hands-on tasks and interactive lectures will enable students to directly handle materials or conduct experiments, making them more involve through quizzes, problem-solving, or discussions.

Significant Effect of Utilization of Kinesthetic Learning Strategies in Earth Science on the Conceptual Mastery

Table 16 presents the results of a multiple regression analysis examining the effect of utilization of kinesthetic learning strategies in earth science on the conceptual mastery.

According to the gathered data by the researcher, interactive learning was evidently having significant effect on the immediate understanding of the conceptual mastery of earth science ($p=0.001$), just like movement-based exercises have significant effect on the students' depth understanding of the earth science concepts ($p=0.029$). Certainly, engaging in interactive learning leads to immediate understanding and mastery of concepts due to its collaborative and stimulating characteristics.



Table 16. Regression Analysis of The Utilization of Kinesthetic Learning Strategies in Earth Science on The Conceptual Mastery

Immediate understanding	B	SE	β	t	p
Constant	1.51	0.556		2.715*	0.008
<i>Simulations</i>		0.147	0.082	0.559	0.578
<i>Hands-on Activities</i>		0.149	0.1	0.671	0.505
<i>Interactive Presentations</i>		0.13	0.448	3.442*	0.001
<i>Movement-based Exercises</i>		0.131	0.031	0.235	0.815
R-squared			.388		
Adjusted R-squared			.35		
Standard Error of the Estimate		.243			
F(4, 65)				10.28	.000
Depth understanding	B	SE	β	t	p
Constant	2.021	0.576		3.51*	0.000
<i>Simulations</i>		0.153	0.172	1.129	0.263
<i>Hands-on Activities</i>		0.155	-0.041	-0.262	0.794
<i>Interactive Presentations</i>		0.135	0.116	0.858	0.394
<i>Movement-based Exercises</i>		0.135	0.303	2.239*	0.029
R-squared			.299		
Adjusted R-squared			.256		
Standard Error of the Estimate		.252			
F(4, 65)				6.928	.000

*p < 0.05

When students actively participate in discussions, role-playing, hands-on activities, or interactive presentations, they are more inclined to comprehend and remember the material. By providing students with opportunities to apply their academic knowledge through practical experiences, movement-based exercises can further enhance their comprehension. By combining interactive teaching methods with physical activities, students are motivated to develop a genuine interest in the subject while also enhancing their academic achievements.

Significant Effect of Utilization of Kinesthetic Learning Strategies in Earth Science on the Long-Term Retention

Table 17 presents the results of a multiple regression analysis examining the effect of utilization of kinesthetic learning

strategies in earth science on the long-term retention.

Based on the table it can be seen that the effect of simulations and interactive presentation on the transfer of learning was evident ($p=0.015$ and 0.012). Also, again the effect of simulations was evident on the practical application, when it comes to long-term retention ($p=0.000$). Students are more engaged when they use interactive presentations and simulations for learning. These offer a realistic and contextual educational experience, promoting critical thinking, problem-solving, and decision-making skills. Active learning has been shown to improve retention and transfer of knowledge, that's why it is evident that simulations allow for repeated practice in a safe environment, strengthening learning and memory.

Table 17. Regression Analysis of The Utilization of Kinesthetic Learning Strategies in Earth Science on The Long-Term Retention

Knowledge retention	B	SE	β	t	p
Constant	1.246	0.649		1.921	0.059
<i>Simulations</i>		0.172	-0.067	-0.389	0.698
<i>Hands-on Activities</i>		0.174	0.303	1.743	0.086
<i>Interactive Presentations</i>		0.152	0.244	1.609	0.112
<i>Movement-based Exercises</i>		0.152	0.252	1.65	0.104
R-squared			.315		
Adjusted R-squared			.273		
Standard Error of the Estimate		.284			
F(4, 65)				7.477	.000
Transfer of learning	B	SE	β	t	p
Constant	.52	0.496		1.049	0.298
<i>Simulations</i>		0.131	0.327	2.493*	0.015
<i>Hands-on Activities</i>		0.133	0.149	1.12	0.267
<i>Interactive Presentations</i>		0.116	0.301	2.596*	0.012
<i>Movement-based Exercises</i>		0.116	0.101	0.867	0.389
R-squared			.549		



Adjusted R-squared				.521	
Standard Error of the Estimate				.217	
F(4, 65)				19.76	.000
Practical application	B	SE	β	t	p
Constant	.794	0.549		1.447	0.153
<i>Simulations</i>		0.145	0.618	4.249*	0.000
<i>Hands-on Activities</i>		0.147	-0.025	-0.169	0.866
<i>Interactive Presentations</i>		0.128	0.011	0.083	0.934
<i>Movement-based Exercises</i>		0.129	0.223	1.732	0.088
R-squared				.514	
Adjusted R-squared				.484	
Standard Error of the Estimate				.24	
F(4, 65)				17.18	.000

*p < 0.05

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings obtained in the study the following conclusions was drawn:

Kinesthetic learning strategies in earth science has significant difference on the diagnostic and summative of the students, rejecting the first null hypothesis. Hence, the utilization of kinesthetic learning strategies in earth science was effective. Since the result showed that using kinesthetic learning techniques helped students improve their performance. These techniques not only help with retaining information but also enhance comprehension and analytical skills by connecting concepts with physical movements. This hands-on learning approach can also increase motivation and promote collaboration among students, creating a sense of teamwork and community.

Kinesthetic learning strategies in earth science has significant effect on the student engagement thus, rejecting the second null hypothesis. Simulations significantly enhance students' behavioral and cognitive engagement, while movement-based exercise boosts emotional and cognitive engagement. These methods create an interactive learning atmosphere, accommodating various learning preferences and promoting participation.

Kinesthetic learning strategies in earth science has significant effect on the conceptual mastery, rejecting the third null hypothesis. The study showed that when students engage in interactive learning, it helps them better understand earth science concepts. By incorporating interactive teaching techniques with physical activities, students are more motivated to learn and become genuinely interested in the subject, leading to improved academic performance.

Kinesthetic learning strategies in earth science has significant effect on the long-term retention, rejecting the fourth null hypothesis. The results reveal that simulations and interactive presentations significantly enhance learning transfer and long-term retention. These methods promote critical thinking, problem-solving, and decision-making skills, enhancing learning and memory. Active learning, facilitated by simulations, enhances learning in a safe environment.

On the basis of the foregoing findings and conclusion of the study, the following recommendations are offered:

1. Maintain a multisensory approach by combining visual, auditory, and tactile elements in all kinesthetic learning strategies to check if it enhances comprehension, retention, and enjoyment of learning.
2. Incorporate regular feedback mechanisms and reflection opportunities for students to assess their progress, identify areas for improvement, and reinforce learning outcomes.
3. Implement active learning strategies like group discussions, hands-on activities, and collaborative projects to encourage student participation, provide ownership, and incorporate real-world examples and creativity for emotional engagement.

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SPECTRA (STIMULATING PHYSICAL EDUCATION THROUGH CREATIVE TEACHING, RHYTHMS, AND ARTS): AS SUPPLEMENTAL MATERIAL IN TEACHING PHYSICAL EDUCATION ON STUDENTS' ENGAGEMENT AND PERFORMANCE

Kristine Telesforo Bacinillo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The study examined the effectiveness of SPECTRA (Stimulating Physical Education through Creative Teaching, Rhythms, and Arts) as supplemental material in Physical Education. Its primary objectives were to assess the level of the components and characteristics of SPECTRA. Additionally, the research aimed to gauge the level of student engagement and performance of students. Lastly, the study aimed to determine the significant effect of using SPECTRA as a supplemental material on both student engagement and performance in Physical Education.

A descriptive method was employed with one hundred twenty-three (123) Grade 9 learners of Liliw National High School in the school year 2023-2024. Research instruments included validated modules and a survey-questionnaire. The statistical tools used were mean, standard deviation and regression analysis. Based on this process, the researcher identified the following findings.

The results indicated that respondents rated the level of the component of SPECTRA in terms of introduction, development, engagement, and assimilation as "very high." Additionally, the characteristics of SPECTRA, such as accuracy, organization, and design, were also rated "very high" by the respondents. Furthermore, student engagement, including enthusiasm in class, completion of activities, and interaction with classmates, was rated as "very high". In terms of student performance, written test scores improved from formative to summative assessments, with students moving from Fair to Outstanding categories, highlighting SPECTRA's positive effect on student achievement. For practical tests, students received "advanced" ratings in execution and technique, performance presence, and dance etiquette for both Cha-cha and Waltz, while their creativity and style were rated as "proficient."

The study revealed that the majority of components and characteristics of SPECTRA did not significantly affect student engagement except on introduction and design respectively. Additionally, only engagement and design significantly affected student performance in written tests, while most components and characteristics of SPECTRA did not show a positive effect. Moreover, none of the components or characteristics of SPECTRA significantly affect student performance in practical tests. Based on these findings, it was concluded that SPECTRA has no significant effect on student engagement and performance in Physical Education. Therefore, both hypotheses were accepted.

Recommendations emphasize prioritizing structured introductions and optimizing the design of instructional materials to enhance student engagement and performance. Physical Education teachers should receive support and training in innovative instructional materials, while school administrators should advocate for curriculum integration of module-based learning in P.E. Other researchers are encouraged to explore and validate similar approaches in diverse educational settings to optimize dance education outcomes.

KEYWORDS: SPECTRA; supplemental material; Physical Education

1. INTRODUCTION

As education continuously improves, innovative methodologies continually emerge to enrich learning experiences and foster student engagement. Among these innovations stands SPECTRA (Stimulating Physical Education through Creative Teaching, Rhythms, and Arts), a supplemental material aimed at redefining the teaching of social dances for Grade 9 learners. By integrating creative teaching strategies and artistic elements, SPECTRA seeks to revolutionize how students engage with physical education, particularly in the realm of social dances.

Central to this investigation was the assessment of how SPECTRA affected student engagement and performance in social dances. Recognizing the important role of engagement in

effective learning, this study measured student enthusiasm, completion of activities, and interaction with classmates, three key indicators reflecting the student engagement. Moreover, performance, the cornerstone of educational attainment, is meticulously evaluated in two dimensions: knowledge and skills.

This study set out to explore the effectiveness of SPECTRA through the lens of specialized physical education teachers. The research endeavored to assess the components and characteristics of SPECTRA, a teacher-made supplemental material in teaching physical education. This supplemental material, crafted to encompass crucial phases of lesson such as introduction, development, engagement, and assimilation are



subjected to analysis, focusing on accuracy, organization, and design.

1.1 Statement of the Problem

Specifically, the study aimed to provide answers to the following questions:

1. What is the level of the component of SPECTRA as supplemental material in terms of :
 - 1.1 introduction;
 - 1.2 development;
 - 1.3 engagement; and
 - 1.4 assimilation?
2. What is the level of the characteristic of SPECTRA as supplemental material in terms of :
 - 2.1 accuracy;
 - 2.2 organization; and
 - 2.3 design?
3. What is the level of student engagement in terms of:
 - 3.1. enthusiasm in class;
 - 3.2. completion of activities; and
 - 3.3. interaction with classmates?
4. What is the level of student performance in terms of:
 - 4.1. written tests as to formative and summative; and
 - 4.2. practical tests as to performance task?
5. Is there significant effect on using SPECTRA as supplemental material to student engagement?
6. Is there significant effect on using SPECTRA as supplemental material to student performance?

2. METHODOLOGY

Given that a descriptive research design is inherently compatible with the goals and technique of the investigation, it is determined to be the best appropriate strategy for this particular study. The goal of descriptive research is to carefully characterize and illustrate the traits, actions, and phenomena that are being studied without changing them from their original

state. This fitted in well with the researcher's objective of evaluating the efficacy and validity of the SPECTRA in the context of physical education. According to Sirisilla (2023) , descriptive research works best when the researcher's goal is to gain a thorough grasp of a phenomenon without getting into causal linkages or changing variables.

3. RESULTS AND DISCUSSION

The presentation, analysis, and interpretation of data were all covered in this chapter. The data was counted, tabulated, and examined as a result. The information acquired from the respondents was displayed in tables, evaluated, and interpreted depending on the data and information collected by the researcher via a questionnaire.

Level of the Component of SPECTRA

In this study, the component of SPECTRA includes introduction, development, engagement and assimilation and was statistically measured by mean and standard deviation.

The level of the component of SPECTRA was revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Level of the Component of SPECTRA in Terms of Introduction

Table 1 shows the level of the component of SPECTRA in terms of introduction. Each statement undergoes evaluation on a scale spanning from 1 to 4, where 4 denotes "Strongly Agree," and 1 denotes the converse sentiment.

Respondents strongly agree with the clarity and consciseness of the introduction section in the supplemental material regarding a module structure (M= 3.71, SD= 0.57). This clarity helps set clear expectations and informs students about the module's content effectively. Similarly, respondents strongly agree that the introduction effectively establishes a positive and inclusive learning environment (M= 3.29, SD= 0.46).

Table 1 Level of the Component of SPECTRA in Terms of Introduction

Statement	Mean	SD	Remarks
The introduction part of the supplemental material...			
phase clearly outlines the learning objectives of the social dance module, ensuring students understand the purpose and expectations of the lessons.	3.64	0.76	Strongly Agree
effectively captures students' interest by providing a real-world context.	3.54	0.60	Strongly Agree
establishes a positive and inclusive learning environment.	3.29	0.46	Strongly Agree
effectively gauges students' prior knowledge of social dances.	3.69	0.46	Strongly Agree
includes a clear and concise overview of the module structure.	3.71	0.57	Strongly Agree

Weighted Mean = 3.58
Standard Deviation = 0.57
Verbal Interpretation = Very High

Overall, the level of the component of SPECTRA in terms of introduction rated very high, with an weighted mean of 3.58 and

a standard deviation of 0.57. The high scores shows that the introduction component of SPECTRA effectively sets the stage



for learning by clearly articulating objectives, sparking student interest, and offering a well-organized overview, fostering a

conducive environment for student preparation and engagement right from the start.

Table 2 Level of the Component of SPECTRA in Terms of Development

Statement	Mean	SD	Remarks
The development part of the supplemental material...			
includes a well-structured progression of lessons.	3.57	0.77	Strongly Agree
incorporates diverse teaching methods, catering to various learning styles.	3.17	0.62	Agree
provides ample opportunities for student collaboration and interaction.	3.62	0.61	Strongly Agree
is age-appropriate.	3.66	0.48	Strongly Agree
is culturally sensitive.	3.56	0.60	Strongly Agree

Weighted Mean = 3.52

Standard Deviation = 0.62

Verbal Interpretation = Very High

Table 2 shows the level of the component of SPECTRA in terms of development .

Respondents strongly agree that the development aspect of the supplemental material is tailored to the appropriate age level (M = 3.66, SD = 0.48). This demonstrates that the material is well-suited to the students' developmental stage, ensuring that the content is relevant and engaging. When it comes to incorporating diverse teaching methods that cater to various learning styles, respondents agree but to a lesser extent (M = 3.17, SD = 0.62).

Overall, the level of component of SPECTRA in terms of development is rated very high, achieving a weighted mean of 3.52 and standard deviation of 0.62. The results reflects a positive outlook with room for continued enhancement in instructional methodology to better accommodate diverse learner preferences. This indicates that, on average, the development of the social dance module was positively evaluated in terms of its structured lesson progression, age-appropriateness, opportunities for collaboration and interaction, and cultural sensitivity, although there is slightly less consensus on the incorporation of diverse teaching methods.

Table 3 Level of the Component of SPECTRA in Terms of Engagement

Statement	Mean	SD	Remarks
The engagement part of the supplemental material...			
ensures that students remain motivated and enthusiastic.	3.54	0.77	Strongly Agree
includes opportunities for student choice and creativity.	3.67	0.58	Strongly Agree
promotes a positive and supportive atmosphere.	3.35	0.48	Strongly Agree
utilized varied multimedia resources, such as music and video demonstrations.	3.63	0.48	Strongly Agree
includes opportunities for students to connect social dance concepts to real-life scenarios.	3.46	0.69	Strongly Agree

Weighted Mean = 3.52

Standard Deviation = 0.60

Verbal Interpretation = Very High

Table 3 presents the level of the component of SPECTRA in terms of engagement.

Respondents strongly agree that the engagement component of the supplemental material offers avenues for student autonomy and creative expression.(M = 3.67, SD = 0.58). This indicates that students are empowered to express themselves and explore various aspects of the subject matter in innovative ways. Respondents also express strong agreement regarding the engagement section of the material, establishing its role in fostering a positive and supportive atmosphere(M = 3.35, SD = 0.48). This shows that the learning environment facilitated by the material is conducive to student growth and collaboration.

Overall, the level of the component of SPECTRA in terms of engagement is very high with a weighted mean of 3.53 and a standard deviation of 0.60. This indicates that the engagement section of the material excels in engaging students effectively, fostering creativity and choice, and creating a positive and supportive learning environment. The consistently strong ratings shows that the material provides enriching learning experience for students.



Table 4 Level of the Component of SPECTRA in Terms of Assimilation

Statement	Mean	SD	Remarks
The assimilation part of the supplemental material... incorporates reflective activities that allow students to articulate their understanding of social dance concepts.	3.59	0.77	Strongly Agree
is aligned with the lesson's learning objectives.	3.72	0.57	Strongly Agree
ensures that students have opportunities to apply social dance principles in practical scenarios.	3.28	0.58	Strongly Agree
includes a summary or review of key concepts.	3.77	0.42	Strongly Agree
has constructive feedback mechanism.	3.24	0.72	Agree

Weighted Mean = 3.52

Standard Deviation = 0.61

Verbal Interpretation = Very High

Table 4 shows the level of component of SPECTRA in terms of assimilation.

Respondents strongly support the notion that the assimilation segment of the supplemental material encompasses a summary or review of key concepts (M = 3.77, SD = 0.42). This shows that the assimilation part of the material reinforces learning by summarizing important information, aiding in retention and comprehension. Also, respondents strongly agree that there is a presence of constructive feedback mechanism within the material (M = 3.24, SD = 0.72).

Overall, the level of component of SPECTRA in terms of assimilation is very high with a weighted mean 3.52 and a standard deviation of 0.61. This illustrates that the material effectively facilitates the absorption and integration of social

dance concepts, with strong alignment with learning objectives, reflective activities, practical applications, and summarization of key concepts. The consistently positive ratings indicate that the material supports students' assimilation of knowledge and skills effectively, contributing to a comprehensive learning experience.

Level of the Characteristic of SPECTRA

In this study, the characteristic of SPECTRA includes accuracy, organization and design and was statistically measured by mean and standard deviation. The level of the characteristic of SPECTRA was revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Table 5 Level of the Characteristic of SPECTRA in Terms of Accuracy

Statement	Mean	SD	Remarks
The supplemental material has reliable and up-to-date information on the history, cultural context, and techniques associated with social dances.	3.44	0.77	Strongly Agree
References and sources used in the supplemental material are cited appropriately.	3.53	0.60	Strongly Agree
Social dance terminology and instructions are clear and precise.	3.65	0.48	Strongly Agree
The information presented is age-appropriate and developmentally suitable.	3.59	0.49	Strongly Agree
Assessments within the supplemental material effectively measure students' understanding of social dance.	3.89	0.47	Strongly Agree

Weighted Mean = 3.62

Standard Deviation = 0.56

Verbal Interpretation = Very High

Table 5 shows the level of the characteristic of SPECTRA in terms of accuracy.

Respondents strongly agree that assessments within the supplemental material skillfully assess students' comprehension of social dance (M = 3.89, SD = 0.47). This indicates the efficacy of assessment methods in evaluating learning outcomes accurately. Also, respondents express strong agreement that the supplemental material offers accurate and contemporary information regarding the history, cultural context, and techniques relevant to social dances (M = 3.44, SD = 0.77).

Overall, the level of the characteristic of SPECTRA in terms of accuracy is very high with a weighted mean of 3.62 and a standard deviation of 0.56, indicating a very high level of agreement among respondents regarding the accuracy of the supplemental material. This shows that, on average, respondents perceive the material to be accurate in terms of social dance terminology, appropriateness for different age groups, appropriate referencing, and effective assessment of student understanding.



Table 6 Level of the Characteristic of SPECTRA in Terms of Organization

Statement	Mean	SD	Remarks
The supplemental material follows a logical and sequential structure.	3.46	0.77	Strongly Agree
Learning objectives are clearly stated at the beginning of each lesson.	3.59	0.60	Strongly Agree
Instructional materials, including handouts, visuals, and multimedia resources are available.	3.61	0.51	Strongly Agree
Transition between different phases (introduction, development, engagement, assimilation) is seamless.	3.63	0.49	Strongly Agree
It makes easy for both teachers and students to locate specific resources and track their progress throughout the supplemental material.	3.80	0.53	Strongly Agree

Weighted Mean = 3.62

Standard Deviation = 0.58

Verbal Interpretation = Very High

Table 6 displays the level of the characteristic of SPECTRA in terms of organization.

Notably, the supplemental material facilitates easy navigation for both teachers and students, enabling them to locate specific resources and monitor their progress effectively (M = 3.80, SD = 0.53). This indicates that the material is meticulously organized, providing clear signposts and navigational aids that streamline the learning process. In addition to that, respondents also strongly agree that the supplemental material follows a logical and sequential structure facilitating a cohesive learning experience (M = 3.46, SD = 0.77).

Overall, the level of the characteristic of SPECTRA in terms of organization is very high with a weighted mean of 3.62 and a standard deviation of 0.58, indicating a very high level of agreement among respondents regarding the organization of the supplemental material. This exhibits that, on average, respondents perceive the material to be well-organized, with

clearly stated learning objectives, availability of instructional materials, seamless transitions between phases, and user-friendly features for resource location and progress tracking.

Level of the Characteristic of SPECTRA in Terms of Design

Table 7 shows the level of the characteristic of SPECTRA in terms of design.

The consensus among respondents is strong regarding the material's accessibility and adaptability for students with a range of learning abilities or disabilities (M = 3.87, SD = 0.48). This exhibits a commitment to inclusivity and accessibility, ensuring that all students can engage effectively with the material, regardless of their learning needs. Likewise, respondents strongly agree that the visual design of the supplemental material is aesthetically pleasing to further engage and motivate learners (M = 3.47, SD = 0.77).

Table 7 Level of the Characteristic of SPECTRA in Terms of Design

Statement	Mean	SD	Remarks
The visual design of the supplemental material is aesthetically pleasing.	3.47	0.77	Strongly Agree
The use of multimedia elements, such as images, videos, and diagrams is purposeful.	3.54	0.60	Strongly Agree
Fonts, colors, and formatting choices are consistent throughout the material.	3.64	0.48	Strongly Agree
It has a balance between text-based information, visual aids, and hands-on activities.	3.57	0.50	Strongly Agree
Material is easily readable and adaptable for students with varying learning abilities or disabilities.	3.87	0.48	Strongly Agree

Weighted mean = 3.62

Standard Deviation = 0.57

Verbal Interpretation = Very High

Overall, the level of the characteristic of SPECTRA in terms of design is very high with a weighted mean of 3.62, with a standard deviation of 0.57, indicating a very high level of agreement among respondents regarding the design of the supplemental material. This displays, on average, respondents perceive the material to have purposeful use of multimedia elements, consistent fonts/colors/formatting, a good balance between text-based information and visual aids, and high readability and adaptability.

Level of Student Engagement

This section presents a comprehensive evaluation of student engagement while using the SPECTRA within the context of Physical Education class. The evaluation focuses on various aspects of students' enthusiasm in class, completion of activities, and interaction with classmates. Each dimension is assessed through specific statements measuring students' attitudes, participation, and social interactions during Physical Education classes.



The level of the student engagement was revealed in the following table, which shows the statement, mean, standard

deviation and verbal interpretation.

Table 8 Level of Student Engagement in Terms of Enthusiasm in Class

Statement	Mean	SD	Remarks
I am excited to participate in Physical Education activities.	3.61	0.51	Strongly Agree
I approach Physical Education class with a positive attitude.	3.52	0.55	Strongly Agree
I actively seek ways to improve my performance in class.	3.50	0.56	Strongly Agree
I willingly engage in new and challenging activities during class.	3.48	0.56	Strongly Agree
I demonstrate enthusiasm by encouraging my classmates during activities.	3.32	0.58	Strongly Agree

Weighted Mean = 3.48

Standard Deviation = 0.55

Verbal Interpretation = Very High

Table 8 shows the level of student engagement in terms of enthusiasm in class.

Students show a clear excitement and eagerness to join in Physical Education activities, demonstrating a strong interest and enjoyment in trying different physical tasks (M= 3.61, SD = 0.51). This indicates a genuine enthusiasm for engaging in various physical endeavors, reflecting their active involvement and interest in the activities offered in PE class while using the SPECTRA. On the other side , while students demonstrate a commendable level of enthusiasm overall, the data shows a marginally lower level of engagement in terms of actively encouraging and supporting their classmates throughout various activities(M= 3.32, SD= 0.58).

The level of student engagement while using SPECTRA as supplemental material in Physical Education Classes in terms of enthusiasm in class is very high with a weighted mean score of 3.48 and a standard deviation of 0.55 . It shows that students generally have a positive and proactive attitude toward their

Physical Education lessons. However, there exists potential for enhancement in cultivating a culture of peer support and encouragement during physical activities, which could further enrich the overall learning experience in Physical Education.

Level of Student Engagement in Terms of Completion of Activities

Table 9 shows the level of student engagement in terms of completion of activities.

Students express strong agreement regarding their commitment to completing all Physical Education activities to the best of their ability(M = 3.50, SD = 0.58), showcasing a high level of dedication and commitment to actively participating in all aspects of the class. While students typically demonstrate commitment to task completion, they also strongly agree with the importance of seeking feedback and guidance from teachers to enhance their performance in physical education activities (M=3.39, SD= 0.60).

Table 9 Level of Student Engagement in Terms of Completion of Activities

Statement	Mean	SD	Remarks
I consistently complete assigned exercises and tasks during class.	3.41	0.59	Strongly Agree
I make an effort to finish all Physical Education activities to the best of my ability.	3.50	0.58	Strongly Agree
I actively participate in all aspects of the class, including warm-ups and cool-downs.	3.50	0.55	Strongly Agree
I am committed to completing Physical Education assignments on time.	3.48	0.53	Strongly Agree
I seek feedback from the teacher to improve my performance in class activities.	3.39	0.60	Strongly Agree

Weighted Mean = 3.46

Standard Deviation = 0.57

Verbal Interpretation = Very High

The level of student engagement while using SPECTRA as supplemental material in Physical Education Classes in terms of completion of activities is very high with a weighted mean score of 3.46 and a standard deviation of 0.57. This signifies a commendable level of dedication and involvement among

students in fulfilling their responsibilities and actively participating in all aspects of their Physical Education sessions, with room for growth in seeking feedback for further improvement.



Table 10 Level of Student Engagement in Terms of Interaction with Classmates

Statement	Mean	SD	Remarks
I collaborate effectively with my classmates during group activities.	3.53	0.53	Strongly Agree
I encourage and support my peers in their Physical Education efforts.	3.42	0.61	Strongly Agree
I actively participate in team-based activities and communicate well with others.	3.47	0.56	Strongly Agree
I am open to working with different classmates in various activities.	3.39	0.60	Strongly Agree
I contribute positively to the overall class atmosphere through my interactions.	3.44	0.55	Strongly Agree

Weighted Mean = 3.45

Standard Deviation = 0.57

Verbal Interpretation = Very High

Table 10 shows the level of student engagement in terms of interaction with classmates.

Students exhibit strong collaboration skills during group activities, (M=3.53, SD = 0.53) that indicates a high level of teamwork and cooperation, showing that students effectively work together towards common objectives, fostering a sense of camaraderie and achievement within the class. Furthermore, students demonstrate a strong willingness to collaborate with different classmates in different activities, showcasing their adaptability and inclusivity in group settings (M= 3.39, SD = 0.60).

The level of student engagement while using SPECTRA as supplemental material in Physical Education Classes in terms of interaction with classmates is very high with a weighted mean score of 3.45 and a standard deviation of 0.57. This shows that, overall, students display commendable levels of teamwork, communication, and positive interaction with their peers. Moreover, there exists an opportunity for enhancing peer support and encouragement, which could further enhance the richness and inclusivity of the learning environment within the Physical Education class.

Level of the Student Performance

In this study, the assessment of student performance encompasses both written and practical tests, which were statistically evaluated using measures such as frequency, percentage, mean, and standard deviation.

The level of student performance was revealed in the following table in terms of written tests as to formative and summative assessments.

Level of Student Performance in terms of Written Tests

Table 11 outlines student performance with the use of SPECTRA in terms of written tests categorized into formative and summative tests.

It is evident that the distribution of students across different performance levels varies significantly between the formative and summative assessments. For the formative assessment, no students (0%) scored in the highest performance category (O - Outstanding); a majority of students (54, 43.90%) scored in the S (Satisfactory) category; a significant number of students (66, 53.66%) scored in the F (Fair) category; and only one student (0.81%) fell into the lowest performance category (NI - Needs Improvement).

Table 11 Level of Student Performance in terms of Written Tests

Raw Score	Students' Performance in terms of Written Tests					
	Formative			Summative		
	F	%	VI	F	%	VI
33-40	0	0 %	O	59	47.97 %	O
25-32	2	1.6 %	VS	58	47.15 %	VS
17-24	54	43.90 %	S	6	4.88 %	S
9- 16	66	53.66 %	F	0	0 %	F
1 - 8	1	0.81 %	NI	0	0 %	NI
	N=123	100 %	F	N=123	100 %	VS
	Mean=16.92 SD=3.39			Mean =32.27 SD=4.21		

In contrast, for the summative assessment, the majority of students (59, 47.97%) achieved the highest performance category (O - Outstanding). Also, a substantial number of students (58, 47.15%) were classified as VS (Very Satisfactory) while a much smaller proportion of students (6, 4.88%) fell into

the S (Satisfactory) category. It was also noted that no students scored in the F (Fair) or NI (Needs Improvement) categories.

These results highlight a notable improvement in student performance from the formative to the summative assessment,



with a significant shift towards higher achievement levels in the summative evaluation. The mean score for the formative assessment was 16.92 (SD = 3.39), indicating a moderate level of overall performance variability among students. In comparison, the mean score for the summative assessment notably increased to 32.27 (SD = 4.21), showing a higher average level of achievement and reduced variability.

These results highlights the pivotal role of continuous assessment and feedback in improving student learning and advancement. The significant improvement in student performance from formative to summative assessments indicates notable progress and highlights the effectiveness of teaching methods and the use of learning materials. This

underscores the importance of personalized support systems and ongoing evaluation processes in fostering student development and academic achievement over time.

Furthermore, consistent assessment practices provide educators with valuable insights into the effectiveness of their teaching methods and curriculum design, allowing for adjustments to better meet student needs. Additionally, ongoing feedback fosters a culture of continuous improvement, assisting students to refine their understanding of course material over time. This dynamic approach not only enhances student learning outcomes but also promotes a more adaptive and responsive educational environment.

Table 12 Level of Student Performance in terms of Practical Tests

Criteria	Performance Task 1 – Chacha			Performance Task 2 – Waltz		
	Mean	SD	VI	Mean	SD	VI
Execution and Technique	4.59	0.49	Advanced	4.88	0.33	Advanced
Creativity and Style	4.11	0.59	Proficient	4.12	0.77	Proficient
Performance Presence	4.56	0.50	Advanced	4.71	0.46	Advanced
Dance Etiquette	4.68	0.47	Advanced	5.00	0.00	Advanced

Table 12 illustrates the level of student performance in terms of practical tests.

The table illustrates the performance levels of students in two practical dance tasks: the Chacha and the Waltz, evaluated based on four criteria: Execution and Technique, Creativity and Style, Performance Presence, and Dance Etiquette. Each criterion was assessed using rubrics, with performance rated on a 5-point scale where 5 indicates "Advanced," 4 "Proficient," 3 "Approaching Proficiency," 2 "Developing," and 1 "Beginning." The standard deviation (SD) reflects the variability of scores among the students.

Based on the results presented in Table 12, students demonstrated a high level of skill and proficiency in execution and technique for Cha-cha (M= 4.59, SD=0.49) and Waltz (M= 4.88, SD= 0.33) dance styles. The mean scores were notably high, indicating an advanced level of performance. The standard deviations were relatively low, showing consistency among students in this aspect of the assessment. This indicates that students consistently performed dance movements with proper basic steps and technique.

In terms of creativity and style, which assesses the incorporation of personal creativity and unique stylistic elements, students performed at a proficient level for both Chacha (M= 4.11) and Waltz (M= 4.12). While the mean scores were respectable, the higher standard deviation in the Waltz (SD=0.77) performance task compared to Chacha (SD= 0.59) indicating slightly more variability in students' creative expressions during the Waltz assessment.

Performance presence, evaluating stage presence, confidence, and expressiveness, was rated as advanced for both Cha- cha

(M= 4.56, SD= 0.50) and Waltz (M= 4.71, SD= 0.46) dance styles. This indicates that students exhibited strong ability to engage the audience and perform confidently. The mean scores were high with relatively low standard deviations shows consistent and impactful performance presence across the board.

Dance Etiquette, assessing adherence to social and cultural norms of the dance, showed exceptional results. Students excelled in demonstrating dance etiquette, particularly in the Waltz performance task (M= 5.00,SD= 0.00) indicating exemplary performance in this criterion. For Cha-cha, although the mean score was slightly lower (M = 4.68,SD=0.47), it still reflects an advanced level of proficiency in observing dance etiquette.

Overall, these results highlight the students' strong technical abilities, impressive performance presence, and adherence to dance etiquette across both Cha-cha and Waltz. While creativity and style were rated at a proficient level, there is room for further exploration and development in this area to enhance students' expressive capacities within the dance forms. The consistency in execution and technique underscores the effectiveness of the instructional approach in fostering skill development and performance readiness among the students.

Significant Effect of SPECTRA on the Student Engagement

The significant effect of SPECTRA on student engagement is evident through an in-depth analysis of the provided table. Data were analyzed using regression analysis, which assessed the relationship between SPECTRA and various aspects of student engagement, such as enthusiasm in class, completion of activities, and interaction with classmates.



Table 13 Significant Effect of SPECTRA on the Student Engagement

		Beta	SE	95 % CI		B	P
				LL	UL		
<i>Enthusiasm in Class</i>	<i>Introduction</i>	0.47	0.19	0.09	0.85	0.33	0.01*
	<i>Development</i>	0.09	0.26	-0.42	0.60	0.08	0.73
	<i>Engagement</i>	-0.54	0.32	-1.17	0.09	-0.46	0.09
	<i>Assimilation</i>	0.30	0.21	-0.12	0.73	0.27	0.16
	<i>Accuracy</i>	-0.08	0.20	-0.49	0.32	-0.05	0.69
<i>Completion of Activities</i>	<i>Organization</i>	-0.25	0.25	-0.73	0.24	-0.15	0.32
	<i>Design</i>	0.69	0.23	0.23	1.15	0.44	0.00*
	<i>Introduction</i>	0.45	0.20	0.06	0.84	0.31	0.02*
	<i>Development</i>	0.01	0.27	-0.51	0.54	0.01	0.96
	<i>Engagement</i>	-0.42	0.33	-1.07	0.23	-0.35	0.21
<i>Interaction with Classmates</i>	<i>Assimilation</i>	0.29	0.22	-0.14	0.73	0.26	0.19
	<i>Accuracy</i>	-0.10	0.21	-0.52	0.32	-0.06	0.63
	<i>Organization</i>	-0.05	0.26	-0.56	0.45	-0.03	0.84
	<i>Design</i>	0.51	0.24	0.04	0.99	0.33	0.03*
	<i>Introduction</i>	0.42	0.20	0.03	0.81	0.29	0.03*
	<i>Development</i>	0.39	0.26	-0.13	0.92	0.33	0.14
	<i>Engagement</i>	-0.45	0.33	-1.10	0.20	-0.38	0.18
	<i>Assimilation</i>	0.19	0.22	-0.25	0.63	0.17	0.39
	<i>Accuracy</i>	-0.39	0.21	-0.80	0.03	-0.23	0.07
	<i>Organization</i>	-0.12	0.25	-0.62	0.39	-0.07	0.65
	<i>Design</i>	0.38	0.24	-0.09	0.85	0.25	0.11

Note: * p < .05.

Table 13 revealed the significant effect of SPECTRA on the student engagement particularly on their enthusiasm in class, completion of activities, and interaction with classmates. The component of SPECTRA in terms of introduction has a statistically significant positive effect on all dimensions of student engagement: enthusiasm in class ($\beta = 0.33$, $p < 0.05$), completion of activities ($\beta = 0.31$, $p < 0.05$), and interaction with classmates ($\beta = 0.29$, $p < 0.05$). The characteristic of SPECTRA in terms of design also showed significant positive effect on two dimensions of student's engagement, enthusiasm in class ($\beta = 0.44$, $p < 0.05$) and completion of activities ($\beta = 0.33$, $p < 0.05$).

These results imply that improvements in the component of SPECTRA in terms of introduction and the characteristic of SPECTRA in terms of design are strongly associated with significant increases in student engagement across various dimensions. As the quality of the introduction and design elements of SPECTRA improves, students tend to show greater enthusiasm, complete more activities, and interact more effectively with their peers. This evidence strongly indicates that SPECTRA has considerable potential to enhance the level of student engagement in physical education. It makes SPECTRA a valuable tool for educators aiming to boost student participation, task completion, and peer interaction.

The positive correlations between these elements of SPECTRA and the different aspects of student engagement provide a robust foundation for further exploration and development of

supplemental materials tailored to optimize learning experiences in physical education. By focusing on creating engaging introductions and well-designed materials, educators can leverage SPECTRA to support and enhance student engagement, ultimately leading to more effective learning outcomes. This underscores the importance of thoughtful instructional design and its significant impact on student engagement and success in physical education settings.

Significant Effect of SPECTRA on the Student Performance

This result shows significant effect of SPECTRA on student performance in terms of written and practical assessments, indicating its effectiveness in enhancing learning outcomes. With notable improvements observed across various assessment modalities, SPECTRA demonstrates potential in positively influencing student performance of Physical Education concepts. Through regression analysis, this discussion aims to analyze the data presented, highlighting how SPECTRA contributes to enhanced student performance and its implications for educational practices in physical education.

Table 14 revealed the significant effect of using SPECTRA on the student performance particularly on their written tests. The component of SPECTRA in terms of engagement ($\beta=0.60$, $p < 0.05$) and the characteristic of SPECTRA in terms of design ($\beta=0.36$, $p < 0.05$) have significantly effect the learner's written tests.



Table 14 Significant Effect of SPECTRA on the Student Performance

		95 % CI					
		Beta	SE	LL	UL	β	P
<i>Written Test</i>	<i>Introduction</i>	3.30	2.24	1.14	7.74	0.20	0.14
	<i>Development</i>	5.24	3.03	0.75	11.24	0.38	0.09
	<i>Engagement</i>	8.30	3.76	15.74	-.85	0.60	0.03*
	<i>Assimilation</i>	0.53	2.52	4.47	5.53	0.04	0.83
	<i>Accuracy</i>	3.60	2.41	1.17	8.37	0.18	0.14
	<i>Organization</i>	4.97	2.91	10.73	0.79	0.26	0.09
<i>Performance Task</i>	<i>Design</i>	6.55	2.72	1.16	11.94	0.36	0.02*
	<i>Introduction</i>	1.12	0.91	0.69	2.93	0.17	0.22
	<i>Development</i>	0.88	1.23	3.32	1.57	0.17	0.48
	<i>Engagement</i>	0.88	1.53	3.92	2.16	0.16	0.57
	<i>Assimilation</i>	1.32	1.03	0.71	3.36	0.26	0.20
	<i>Accuracy</i>	0.33	0.98	2.27	1.62	0.04	0.74
	<i>Organization</i>	0.38	1.19	2.73	1.97	0.05	0.75
	<i>Design</i>	0.30	1.11	2.49	1.90	0.04	0.79

Note: * p < .05.

These results imply that improvements in the component of SPECTRA in terms of engagement and the characteristic of SPECTRA in terms of design are strongly linked with significant increases in students' written test scores. This evidence highlights the potential of SPECTRA to enhance students' academic performance in physical education by focusing on both engaging content and high-quality design. As the material becomes more engaging and better designed, students are likely to develop a deeper understanding of the content, which is reflected in their improved written test scores.

Also, these results underscore the importance of investing in engaging educational materials like SPECTRA, as they significantly affect students' academic performance. Additionally, they highlight the ongoing need to enhance the quality of such resources to ensure alignment with evolving educational standards. Lastly, they emphasize the potential of innovative teaching approaches, such as SPECTRA, to deepen student learning and mastery in physical education. Recognizing and acting on these implications can support student success and advancement in the field.

However, it is important to note that while SPECTRA significantly affects students' written test performance, it does not have a significant effect on their performance in practical tests. This means that while the supplemental material is effective in enhancing cognitive understanding and retention, it may not directly translate to improvements in practical skills. Therefore, additional strategies or resources might be needed to address practical performance aspects in physical education. Overall, these findings provide robust evidence that SPECTRA has the potential to improve students' academic outcomes in physical education, particularly in their written tests. By focusing on enhancing both engagement and design components, educators can leverage SPECTRA to support and boost students' learning and performance across various dimensions of their physical education curriculum.

The literature and research on module-based learning provide insights into its impact on student performance across different types of assessments. Studies by Dejene & Chen (2019) and

Sadiq & Zamir (2014) suggest that module-based learning, characterized by structured units of instruction, can be effective in improving performance in written tests by promoting deeper understanding and retention of theoretical concepts.

4. CONCLUSION AND RECOMMENDATIONS

Considering the results of the study, the following conclusions were drawn:

1. The study revealed that there is no significant effect of using SPECTRA as supplemental material in Physical Education on student engagement. Specifically, it highlighted that only the component and characteristic of SPECTRA in terms of introduction and design positively influence various dimensions of student engagement, including enthusiasm in class, completion of activities, and interaction with classmates. While the majority of components and characteristics of SPECTRA did not show significant effects, this reveals that the hypothesis is accepted.
2. The study showed that there is no significant effect of using SPECTRA as supplemental material in Physical Education on student performance. Specifically, it highlighted that only the component and characteristic of SPECTRA in terms of engagement and design positively influence student performance in terms of written tests. However, there is no significant effect on student performance in terms of practical tests. This reveals that the hypothesis is accepted.

Considering the key findings and conclusions of his study, the researcher recommends the following.

1. Physical Education Teachers may implement clear and structured introductions in dance modules similar to SPECTRA to enhance student engagement. They are encouraged to ensure learning objectives are outlined and expectations are clearly communicated to students. Moreover, it is recommended that they utilize visually appealing and well-organized instructional materials like those in SPECTRA to promote enthusiasm and completion of activities among students. Specifically, they may incorporate multimedia resources effectively in dance



lessons to foster a positive classroom atmosphere and encourage interaction among students.

2. Head Teachers of MAPEH may encourage and support Physical Education teachers in adopting innovative instructional designs like SPECTRA to improve student engagement and participation. They may also provide professional development opportunities for teachers to enhance their skills in module-based teaching and instructional material design.
3. School Heads may advocate for the integration of module-based learning approaches in Physical Education curriculum to optimize student learning outcomes and engagement. He/She may also allocate funding for implementing innovative teaching practices and acquiring necessary resources for effective dance education.

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EXTRACURRICULAR ACTIVITIES ON THE LEARNER'S DEVELOPMENT AND PERFORMANCE

Marian Aderiz Arroyo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The main purpose of the study is to determine the effect of extracurricular activities on the learner's development and performance. Specifically, this study aimed: The following objectives were sought: to determine the level of values of extracurricular activities in terms of discipline, leadership, life skills, and stress relief; to measure the level of level of the learner's development in terms of independent learning, goal-orientation, socialization, and self-efficacy; to test whether the level of values of extracurricular activities has a significant effect to the learner's development; and to test the level of values of extracurricular activities has significant effect to the performance of the learners.

The descriptive method was used to determine the level of students' acceptance of popular culture using developmental methods of intercultural sensitivity. The primary respondents of this study were 275 out of grade 12 learners of Cluster 5 integrated schools in Laguna. The major instrument used by the researcher was a questionnaire checklist in obtaining needed information from many students. The questionnaires created by the researcher were evaluated.

Analysis revealed that the level of values of extracurricular activities in terms of discipline, leadership, life skills, and stress relief and the level of the learner's development in terms of independent learning, goal-orientation, socialization, and self-efficacy are "very high". Lastly, it also revealed that discipline significantly enhances independent learning and socialization. Similarly, leadership significantly boosts socialization. Furthermore, life skills exhibit significant positive effects on socialization and stress relief.

Furthermore, the study shows the significant effect of different values associated with extracurricular activities on the performance of learners. There is a significant effect of discipline on learner performance, leadership, life skills, stress relief. This means that regular participation in extracurricular activities requires commitment and consistency, fostering overall values of the learner in these values can transfer to their academic endeavors, leading to improved time management, study habits, and overall performance. Therefore, the null hypotheses have been rejected.

Based on the drawn results and conclusions, it is therefore recommended that further research may be conducted to investigate the factors that influence the significance level of extracurricular among students who are not interested in any extracurricular activities, as this can aid in the development of more effective strategies for promoting diversity and inclusion in educational settings.

KEYWORDS: extracurricular activities; learner's development; performance

1. INTRODUCTION

Students are returning to in-person instruction more than two years after COVID pandemic emptied schools. Despite providing online education during the pandemic, many students in the Philippines were unable to access socially defined learning. After spending so much time away, students' already tenuous connection to school may have completely affected in certain situations.

In addition, after a two-year break from face-to-face instruction, schools are now faced with the daunting challenge of teaching many students who have even fallen behind. Additionally, Dendevnorov (2022), the Philippines' UNICEF representative, stated that children should remember that today marks the start of a protracted process towards learning recovery as they return to school.

Moreover, students are unable to take part in extracurricular activities that are required for their curriculum because of the pandemic. These activities include field trips, competitions, scouting, book readings, seminars, conferences, camps,

tournaments, and picnics. These activities are designed to get theyngsters moving, activate different senses, teach them through hands-on experiences, and have some fun, both within and outside of the classroom (Yildirim, 2019).

It implies that a student who is very involved is one who, for instance, invests a lot of time in their studies, spends a lot of time on campus, actively engages in student organizations, and engages in a lot of social interaction. It can also help the students to enhance their full potential.

Besides, according to Selanik-Ay and Erbasan, 2016, it is believed that children learn more from experiences in traditional classrooms when education-related activities are carried out outside of the classroom, which foster socialization and positively influence students' values. of the classroom, which fosters socialization and positively influences students' values. It also equips students in the future. Students who battled with institutional fit and were unlikely to stick around were those who did not feel comfortable at the institution or thought they had no place there. Students are better equipped to



generate ideas and retain what they are learning when they are engaged in their favorite activities and talents.

Furthermore, according to Llego (2022), extracurricular activities allow students to explore their interests, meet new people, and learn new skills. They can also help students build confidence and learn how to manage their time and resources that are integrated into the campus community were more likely to stick with it than those who did not have these kinds of deep connections. Students who battled with institutional fitness and were unlikely to stick around were those who did not feel comfortable at the institution. All these benefits can translate into success in school and life. The study's main goal is to research the effect of extracurricular activities on student learner's development and performance on the new normal.

1.1 Statement of the Problem

Specifically, it attempted to answer the following questions:

1. What is the level of values of extracurricular activities of the learners in terms of;
 - 1.1. Discipline;
 - 1.2. Leadership;
 - 1.3. Life Skills; and
 - 1.4. Stress Relief?
2. What is the level of the learner's development in terms of;
 - 2.1. Independent Learning;
 - 2.2. Goal-orientation;
 - 2.3. Socialization; and

2.4. Self-efficacy?

3. Do the values of extracurricular activities have significant effect to the learner's development?
4. Do the values of extracurricular activities have a significant effect on the performance of the learners?

2. METHODOLOGY

Descriptive method of research was used in this study to answer the research problems and obtain the objectives put forward in this paper.

Descriptive methods of research explore a phenomenon, group, or population. Data is collected and analyzed to characterize a group or phenomenon. Descriptive research aims to portray the topic accurately and objectively. (Aggarwal & Ranganathan, 2019)

3. RESULTS AND DISCUSSION

This chapter discusses the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The tabular presentations and discussions further showed significant effect of extracurricular activities on the learners' development and performance.

Level of Values of Extracurricular Activities

The values of extracurricular activities of the learners includes discipline, leadership, life skills and stress relief and was determined by mean and standard deviation.

Table 1. Level of Values of Extracurricular Activities of the Learners in terms of Discipline

Indicators	Mean	SD	Remarks
1. I can understand the rules and regulations of the school.	4.48	0.53	Always
2. I can determine the consequences of my behavior toward others.	4.47	0.51	Always
3. I can illustrate the important values associated with self-control.	4.42	0.60	Always
4. I choose to attend classes on time.	4.48	0.61	Always
5. I eat healthy foods and get regular physical activities.	4.48	0.54	Always

Overall Mean = 4.47

Standard Deviation = 0.56

Verbal Interpretation = Very High

Table 1 indicates the level of value of extracurricular activities of the learners in terms of discipline. Students always identify the significance of extracurricular activities for learners in fostering discipline, exhibit an understanding of school rules and regulations, actively participate in classes, opt for nutritious meals, and engage in regular activities, as indicated by a mean score of (M=4.48). Likewise, students always illustrate the important value associated with self-control (4.42). The overall mean of 4.47 and the standard deviation of 0.56 indicate a very high level of discipline of the learners in extracurricular activities. This means that there's a notable emphasis on self-control and discipline among learners in extracurricular pursuits.

Table 2 shows the level of value of extracurricular activities of the learners in terms of leadership. It can be observed that the students always ask for ideas and input on plans and projects and ask for approval of each individual or the majority for major decisions to be made, as indicated by a mean score of (M=4.36). Also, students always allow others to determine what needs to be done and how to do it (4.48), delegate tasks to implement a process or procedure (4.32) and find practical solutions to problems (4.35). The overall mean of 4.37 and the standard deviation of 0.60 indicate a very high level of leadership of the learners in extracurricular activities. This means that there's a remarkable prominence on decision-making and problem-solving among learners in extracurricular interests.



Table 2. Level of Values of Extracurricular Activities of the Learners in terms of Leadership

Indicators	Mean	SD	Remarks
1. I ask for ideas and input on plans and projects.	4.36	0.64	Always
2. I allow others to determine what needs to be done and how to do it.	4.48	0.64	Always
3. I delegate tasks to implement a process or procedure.	4.32	0.57	Always
4. I ask for approval of each individual or the majority for major decisions to be made.	4.36	0.56	Always
5. I can find practical solutions to problems.	4.35	0.59	Always

Overall Mean = 4.37

Standard Deviation = 0.60

Verbal Interpretation = Very High

Table 3 indicates the level of learners' development in terms of life skills. Learners can always handle change well (M: 4.52), On the other hand, learners are always interested in how others feel (M: 4.41). Likewise, learners can always follow certain steps on dealing and solving problems (M: 4.49), reflect critically on experience (M: 4.29), and adapt varied roles and responsibilities (M:4.63). The overall mean of 4.47 with the

standard deviation of 0.53. This means that consistently demonstrate a high level of life skills, as evidenced by their proactive engagement with assessing their abilities, seeking help when necessary, persisting through challenges, and resolving difficulties through skills.

Table 3. Level of Values of Extracurricular Activities of the Learners in terms of Life Skills

Indicators	Mean	SD	Remarks
1. I can handle change well.	4.52	0.50	Always
2. I am interested of how others feel.	4.41	0.51	Always
3. I follow certain steps on dealing and solving a problem.	4.49	0.51	Always
4. I reflect critically on experience.	4.29	0.57	Always
5. I can adapt varied roles and responsibilities.	4.63	0.50	Always

Overall Mean = 4.47

Standard Deviation = 0.53

Verbal Interpretation = Very High

Table 4 presents the level of values of extracurricular activities of the learners in terms of stress relief. It shows that learners always try to adjust their mindset and allow self to be happier and discuss issues others and ask for their opinions (M:4.48). While learners always having fun to decrease the stress (M: 4.41). Likewise, learners always look for spiritual hope and

comfort (M: 4.35) and always calm down first and think how to reconcile the negative emotions (M: 4.36). The overall mean of 4.42 and the standard deviation of 0.59 state a very high level of stress relief for the learners in extracurricular activities. This means that there's a renowned importance on having fun and relaxing among learners in extracurricular involvement.

Table 4. Level of Values of Extracurricular Activities of the Learners in terms of Stress Relief

Indicators	Mean	SD	Remarks
1. I have fun to decrease my stress.	4.41	0.65	Always
2. I try to adjust my mindset and allow myself to be happier.	4.48	0.54	Always
3. I discuss issues others and ask for their opinions.	4.48	0.56	Always
4. I look for spiritual hope.	4.35	0.52	Always
5. I let myself calm down first and think how to reconcile the negative emotions.	4.36	0.65	Always



Overall Mean = 4.42
 Standard Deviation = 0.59
 Verbal Interpretation = Very High

Moreover, an individual should be able to control their stress and feel that their stress management strategy is well aligned with their values and lifestyle. Likewise, there are several different effective stress-reduction strategies. In addition to practices that enhance physical health, including exercise and diet, they may also contain tactics that enhance mental and emotional stability. Researchers studying epidemiology and healthcare have recently shown a great deal of interest in the

mindfulness-based stress-reduction strategy. People who practice participating in various educational from an early age get the ability to process the totality of their well-being.

Level of the Learner’s Development

Level of learners’ development include independent learning, goal-orientation, socialization and self-efficacy and was determined by mean and standard deviation.

Table 5. Level of the Learner’s Development in terms of Independent Learning

Indicators	Mean	SD	Remarks
1. I can assess my skills and abilities.	4.51	0.51	Always
2. I have the courage to ask if needed.	4.39	0.50	Always
3. I can recognize if I am stuck and need to change strategy.	4.41	0.53	Always
4. I try harder if I cannot understand things at first glance.	4.44	0.59	Always
5. I overcome my difficulties on my own.	4.40	0.53	Always

Overall Mean = 4.43
 Standard Deviation = 0.53
 Verbal Interpretation = Very High

Table 5 portends the level of learner’s development in terms of independent learning. Learners always assess their skills and abilities (M=4.51), On the other hand, learners always have the courage to ask if needed (M= 4.39). The overall mean of 4.43 with the standard deviation of 0.53. This means that

consistently demonstrate a high level of independence in their learning endeavors, as evidenced by their proactive engagement with assessing their abilities, seeking help when necessary, adapting strategies when stuck, persisting through challenges, and resolving difficulties autonomously.

Table 6. Level of the Learner’s Development in terms of Goal-orientation

Indicators	Mean	SD	Remarks
1. I prefer to work on tasks that force me to learn new things.	4.46	0.55	Always
2. I set tactical (short-term) and strategic (long-term) goal.	4.56	0.55	Always
3. I feel satisfied when I accomplish something.	4.33	0.57	Always
4. I challenge myself to improve and accelerate.	4.33	0.51	Always
5. I try hard to improve my past performance.	4.33	0.62	Always

Overall Mean = 4.40
 Standard Deviation = 0.57
 Verbal Interpretation = Very High

Table 6 illustrates the level of learner’s development in terms of goal-orientation. The students always feel satisfied when accomplished something, challenge themselves to improve and accelerate, and try hard to improve the past performance (M: 4.33). On the other hand, they always prefer to work on tasks that force them to learn new things (M:4.46) and always set tactical (short-term) and strategic (long-term) goals (M: 4.56).

The weighted mean of 4.40 and standard deviation of 0.57 indicate the level of learner’s development in terms of goal-orientation is very *high*. This means that the students have the capacity to set goals and that the respondents have a tendency to take initiative to improve and accomplish something strategically.

Table 7 shows the level of the learner’s development in terms



of socialization. Based on the responses of the learners they always like to participate in any sort of social activities (M:4.46). They always prefer being respectful for the value perception (M:4.35), choose helping other people instead of arguing in public (M:4.39). On the other hand, learners always feel alive when I am working with others (M: 4.39) and get along with other people with different personalities (M: 4.50).

The weighted mean of 4.39 with standard deviation of 0.53, indicates that the level of learner’s development in terms of socialization is very high. This means that the extracurricular involvement greatly enhanced the socialization skills of the learners which allow them to nurture themselves.

Table 7. Level of the Learner’s Development in terms of Socialization

Indicators	Mean	SD	Remarks
1. I like to participate on any sort of social activities.	4.46	0.51	Always
2. I prefer being respectful for the value perception.	4.35	0.49	Always
3. I choose helping other people instead of arguing in public.	4.39	0.52	Always
4. I usually feel alive when I am working with others.	4.25	0.58	Always
5. I can get along with other people with different personality.	4.50	0.50	Always

Overall Mean = 4.39
 Standard Deviation = 0.53
 Verbal Interpretation = Very High

Table 8 shows the level of the learner’s development in terms of self-efficacy. It can be observed that the learners always consider that practice every day could develop any skills, as indicated by a mean score of (M: 4.37). Also, learners always believe hard work pays off (M:4.46) and change basic level of ability considerably (M: 4.45). On the other hand, learners

always believe that they can achieve the goals they set for themselves (M: 4.28) and focus on progress instead of feeling discouraged (M: 4.32). The overall mean of 4.38 and the standard deviation of 0.57 indicate a very high level of self-efficacy of the learners in extracurricular activities.

Table 8. Level of the Learner’s Development in terms of Self-efficacy

Indicators	Mean	SD	Remarks
1. I consider that if I practice every day, I could develop any skills.	4.37	0.62	Always
2. I believe hard work pays off.	4.46	0.51	Always
3. I can change my basic level of ability considerably.	4.45	0.54	Always
4. I am confident that I will achieve the goals I set for myself.	4.28	0.52	Always
5. I focus on progress instead of feeling discouraged.	4.32	0.63	Always

Overall Mean = 4.38
 Standard Deviation = 0.57
 Verbal Interpretation = Very High

The conviction that one can accomplish an objective or obtain a desired result is known as self-efficacy. One’s actions and techniques for pursuing a goal are shaped by this belief, which is particular to a task, field of knowledge, or performance. Positivity toward one’s own control is shown in high self-efficacy.

has also shown that students with high self-efficacy attend more classes, work harder, stay longer, and have less negative emotional reactions when they get into trouble than students with lower self-efficacy.

Furthermore, research shows that self-efficacy can improve student achievement, promote emotional health and well-being, and be a valid predictor of motivation and learning. Research

Table 9 presents the results of a statistical analysis examining the effect of different values associated with extracurricular activities on learner development. The values considered are discipline, leadership, life skills, and stress relief.



It can be observed that discipline significantly enhances independent learning and socialization ($p = 0.002$). Similarly, leadership significantly boosts socialization ($p = 0.013$). Furthermore, life skills exhibit significant positive effects on socialization ($p = 0.037$) and stress relief ($p = 0.012$). However, certain effects, such as leaderships on stress relief and self-

efficacy, fail to achieve statistical significance. This analysis underscores the diverse ways in which extracurricular activities contribute to learner development, emphasizing the importance of discipline, leadership, and life skills in fostering positive outcomes.

Table 9. Significant Effect of Values of Extracurricular Activities to the Learner's Development

Values of Extracurricular Activities	Learners Development	Beta	SE	95 % CI		β	p
				LL	UL		
Discipline	Independent Learning	0.256	0.081	0.098	0.415	0.28	0.002*
Leadership		0.028	0.075	-0.12	0.176	0.031	0.709
Life Skills		0.053	0.1	-0.143	0.249	0.056	0.596
Stress Relief		-0.112	0.105	-0.319	0.095	-0.111	0.288
Discipline	Goal-orientation	0.006	0.085	-0.161	0.174	0.007	0.94
Leadership		0.104	0.079	-0.052	0.261	0.112	0.191
Life Skills		0.016	0.105	-0.191	0.222	0.016	0.882
Stress Relief		-0.077	0.111	-0.295	0.142	-0.075	0.491
Discipline	Socialization	0.032	0.088	0.141	0.205	0.033	0.013*
Leadership		0.093	0.082	0.069	0.254	0.095	0.02
Life Skills		0.104	0.109	0.109	0.318	0.104	0.037*
Stress Relief		-0.013	0.115	0.238	0.213	0.012	0.012*
Discipline	Self-Efficacy	0.035	0.078	0.119	0.19	0.041	0.652
Leadership		0.074	0.073	0.071	0.218	0.485	0.016*
Life Skills		0.065	0.097	0.126	0.255	0.672	0.006*
Stress Relief		0.019	0.102	0.183	0.221	0.02	0.853

Note: * $p < .05$.

Table 10 shows the results of a study analyzing the significant effect of different values associated with extracurricular activities on the performance of learners. There is a statistically significant effect of discipline on learner performance, as indicated by ($p=0.039$), leadership ($p=0.005$), life skills ($p=0.040$), stress relief ($p=0.039$). This means that regular

participation in extracurricular activities requires commitment and consistency, fostering overall values of the learner in these values can transfer to their academic endeavors, leading to improved time management, study habits, and overall performance.

Table 10. Significant Effect of Values of Extracurricular Activities to the Performance of Learners

Values of Extracurricular Activities	Learner's Performance	Beta	SE	95 % CI		β	P
				LL	UL		
Discipline	Grades	-0.785	0.82	2.399	0.829	-0.087	0.039*
Leadership		0.396	0.766	1.112	1.905	0.044	0.005*
Life Skills		-0.717	1.013	2.712	1.278	-0.077	0.040*
Stress Relief		-0.217	1.071	2.325	1.891	-0.022	0.039*

Note: * $p < .05$.



4. CONCLUSION AND RECOMMENDATIONS

The following conclusions are drawn based on the foregoing findings of the study:

1. The study shows that discipline significantly enhances independent learning and socialization. Similarly, leadership significantly boosts socialization. Furthermore, life skills exhibit significant positive effects on socialization and stress relief. However, certain effects, such as leaderships on stress relief and self-efficacy, fail to achieve statistical significance. This analysis underscores the diverse ways in which extracurricular activities contribute to learner development, emphasizing the importance of discipline, leadership, and life skills in fostering positive outcomes. It was inferred that the null hypothesis was rejected.
2. The study shows the significant effect of different values associated with extracurricular activities on the performance of learners. There is a statistically significant effect of discipline on learner performance, leadership, life skills, stress relief. This means that regular participation in extracurricular activities requires commitment and consistency, fostering overall values of the learner in these values can transfer to their academic endeavors, leading to improved time management, study habits, and overall performance. It was inferred that the null hypothesis was rejected.

In view of the presented conclusions, the following recommendations are hereby advanced.

1. The students may explore diverse forms of extracurricular activities like theater, music, arts, sports, community engagement and the like to enhance their total development.
2. Parents may encourage their children to participate in extracurricular activities actively by setting examples to them as they also actively engage in different social activities in school and the community.
3. Schools may offer some sort of other extracurricular programs like sports fest, arts, and music fest in their school for students who are not actively involved in extracurricular activities and may find it as preventive intervention for declining students' performance.

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TLE AUDIO-VISUAL: EFFECT ON STUDENTS MOTIVATION AND PERFORMANCE

Maribel Rada Mariano

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The study aimed to determine the effect of integration of TLE audio-visual in remedial activity of Grade 7 students. The study sought to determine the level of acceptability of audio-visual content, features, students' motivation, and performance. Also, the significant effect of TLE audio-visual content and features on grade 7 students' motivation and the significant difference between the students' performance in the formative and summative were identified.

The research design employed was a pre-experimental design, specifically the one-shot case study design. The respondents of the study comprised 10 TLE teachers from the Bay Sub-Office, who validated the TLE audio-visual. The participants in the remediation program consisted of a total of 80 Grade 7 students. A researcher-made checklist questionnaire was employed as part of the instrument for data gathering in validating the audio-visual, while the formative and summative test were used to determine the effectiveness of the approach.

The following statements are the findings that were formulated: The level of acceptability of the components of the audio-visual content including objectives, sequence, language usage, and inclusivity, was rated as highly acceptable. The acceptability level of the features of the audio-visual varied. Visual effects were rated as acceptable, whereas audio, resolution, and design were all rated as highly acceptable. The level of students' motivation in terms of learning relevance, use of time management, and developing self-discipline were also acceptable. In the students' learning outcomes, the formative test results were very satisfactory while the summative test results were outstanding. The audio-visual content and features to the students' motivation among Grade 7 students significantly affects the outcome variable. Lastly the integration of audio-visual of Grade 7 students has a significant positive effect on students' performance of the Grade 7 students. The TLE audio-visual is effective indicating that there is a significant effect of audio-visual content and features to grade 7 students' motivation and at the same time there is a significant difference between the students' performance in the formative and summative test leading to rejection of both hypotheses. The researcher encourages the development and utilization of audio-visual materials by teachers within the teaching and learning process, aimed at addressing learning gaps observed in specific subject areas.

KEYWORDS: integration; TLE audio-visual; remedial activity

1. INTRODUCTION

The motivation of the students to learn is critical since it affects the attainment of best possible learning outcome. They may lack enthusiasm to learn as they pay little attention to learning activities whenever there is a failure in the use of instructional media thus they will gain less than the optimal knowledge.

Competent teachers are good in creating effective learning environment to motivate learners (Yunos 2020). Pardjono et al. (2018) vocational education equips learners with various competencies, including information technology skills, which are essential for their employment prospects. The 21st century teachers face new technological education challenges (Akturk and Ozturk, 2019) the students are well-equipped with (Mangubat, 2022).

TLE (Technology and Livelihood Education) is one performance-based discipline that requires a live demonstration. Technology has become increasingly significant in education such as videos and audio visuals. However, it is said to be a potent educational instrument that can also boost the learning rate which in the literature this approach gained little attention (Temple, 2022).

In Grade 7, when students are at a pivotal point in their educational journey, navigating the complexities of academic obstacles requires creative techniques to reinforce their core

learning. This study explores a customized intervention that incorporates audio-visual exercises with remedial activities to address the varied learning demands of the cohort. The goal is not only to augment conventional teaching strategies but also to transform remedial sessions into engaging, multimodal learning environments that target academic challenges experienced by students in Grade 7.

It becomes clear how important it is for students to grasp foundational concepts as they move from basic to more advanced education. Understanding that not all learners will benefit from traditional remedial methods, this study investigates the possibilities of audio-visual. The significance of grasping foundational concepts becomes evident as students move through the critical transition from elementary to higher education levels. This study investigates the possibilities of audio-visual rehabilitation since it is acknowledged that traditional remedial methods may not always be effective for all learners.

The distinctiveness of this research lies in its specificity. By meticulously examining academic records, considering teacher insights, and incorporating student feedback, precise stumbling blocks in the Grade 7 curriculum are pinpointed. The objective extends beyond the mere introduction of technology into the classroom; rather, envisioning technology as a targeted tool to address and overcome identified academic challenges. Through a blend of theoretical frameworks and empirical investigations,



this inquiry aims to provide concrete evidence supporting the transformative potential of audio-visual interventions in remedial education for Grade 7 students.

Ultimately, this research on TLE Audio-Visual: Effect on Students Motivation and Performance seeks to contribute more than just insights; it aspires to lay the foundation for future remedial strategies, fostering not only enhanced academic proficiency but also a sense of confidence and empowerment among Grade 7 learners. Thus, the researcher intends to pursue the study to delve deeper into the effect of the audio-visual exercises used in the remedial activity in improving the performance of the Grade 7 students.

1.1 Statement of the Problem

Specifically, the study will seek to answer the following:

1. What is the level of acceptability of TLE audio-visual content in terms of:
 - 1.1 objectives;
 - 1.2 sequence;
 - 1.3 language used; and
 - 1.4 inclusivity?
2. What is the level of acceptability of TLE audio-visual features in terms of:
 - 2.1 visual effect;
 - 2.2 audio;
 - 2.3 resolution; and
 - 2.4 design?
3. What is the level of students' motivation while using TLE audio visual in terms of:
 - 3.1 learning relevance;
 - 3.2 use of time management; and
 - 3.3 developed self-discipline?
4. What is the level of students' performance in written test in terms of:
 - 4.1 formative test; and
 - 4.2 summative test?
5. Is there a significant effect of TLE audio-visual content and features to grade 7 students' motivation?
6. Is there a significant difference between the students' performance in the formative and summative test?

2. METHODOLOGY

The study utilized a pre-experimental design, specifically the one-shot case study design. Pre-experimental design includes

one or more experimental groups to be observed against certain treatments. It is the simplest form of research design that follows the basic steps in experiments. This design was chosen as it best suited the current research study, where one group of students was exposed to audio-visual material as a remediation tool.

One-shot case study design involves studying a single group at a single point in time after applying a treatment presumed to cause change. The carefully studied single instance is compared to general expectations of what the case would have looked like had the treatment not occurred and to other events casually observed. No control or comparison group is employed (Mauldin, 2020).

3. RESULTS AND DISCUSSION

The data were analyzed and interpreted so that conclusions and recommendations could be drawn.

Level of Acceptability of TLE Audio-Visual Content

The level of acceptability of TLE audio-visual content in terms of objectives, sequence, language used, and inclusivity was treated statistically using mean and standard deviation.

Table 1 shows the level of acceptability of audio-visual content in terms of objectives. Also shows the statements, mean, standard deviation and remarks.

The validators strongly agree that the objectives are relevant to the topics covered in the curriculum guide. (M = 4.60 and SD=0.52) showing a high level of acceptability of audio-visual content in terms of objectives. On the other hand, the validators agree that the objectives are attainable. While the mean and standard deviation are slightly lower (M = 4.20 and SD = 0.63), it still indicates a high level of acceptability of audio-visual content in terms of objectives.

The level of acceptability of audio-visual content in terms of objectives attained a weighted mean score of 4.36 and a standard deviation of 0.53, verbally interpreted as *highly acceptable* among the respondents.

This implies that audio-visual is generally well-accepted by validators in terms of achieving educational objectives. These exercises offer numerous advantages, such as increased student engagement, improved understanding of complex concepts, and flexibility in learning.

Table 1 Level of Acceptability of Audio-Visual Content in Terms of Objectives

The objectives...	MEAN	SD	REMARKS
...are relevant to the topics covered in the curriculum guide.	4.60	0.52	Strongly Agree
...are specific and clearly stated.	4.40	0.52	Strongly Agree
...are attainable.	4.20	0.63	Agree
...are measurable.	4.30	0.48	Strongly Agree
...are Time-bound	4.30	0.48	Strongly Agree
Weighted Mean	4.36		
SD	0.53		
Verbal Interpretation			Highly Acceptable



Table 2 shows the level of acceptability of audio-visual content in terms of sequence. Also shows the statements, mean, standard deviation and remarks.

The validators strongly agree that the sequence of the lesson follows the procedures of the teaching-learning process. (M = 4.50 and SD=0.53) conclude a high level of acceptability of audio-visual content in terms of sequence. On the other hand, the validators agree that the sequence follows a logical progression, guiding learners through the content in a coherent and understandable manner. While the mean and standard deviation are slightly lower (M = 4.10 and SD = 0.57), it still indicates a high level of acceptability of audio-visual content in

terms of sequence.

The level of acceptability of audio-visual content in terms of sequence attained a weighted mean score of 4.34 and a standard deviation of 0.56, verbally interpreted as *highly acceptable* among the respondents.

This implies that audio-visual laboratory exercises are generally well-accepted by validators in terms of learning sequence. The learning contents of the audio-visual materials must be complete to attain the purpose of the materials, ensuring comprehensive understanding and engagement from the audience.

Table 2 Level of Acceptability of Audio-Visual Content in Terms of Sequence

The sequence ...	MEAN	SD	REMARKS
... of the lesson follows the procedures of the teaching-learning process.	4.50	0.53	Strongly Agree
... of concepts is based on an inductive approach.	4.30	0.67	Strongly Agree
... is carefully structured to facilitate comprehension and retention of key concepts.	4.40	0.52	Strongly Agree
... of ideas integrates scaffolded learning activities to support gradual skill development and deeper understanding.	4.40	0.52	Strongly Agree
... follows a logical progression, guiding learners through the content in a coherent and understandable manner.	4.10	0.57	Agree
Weighted Mean	4.34		
SD	0.56		
Verbal Interpretation	Highly Acceptable		

Teaching materials have helped students to retain knowledge better thereby making learning to be permanent; it enables students to retain and recall what they have learned. The inculcation of teaching materials helps students to experience concepts virtually which results in making lessons explicit to the students and expanding their horizon of experience (Mensah, 2022).

Table 3 shows the level of acceptability of audio-visual content in terms of language used. Also shows the statements, mean,

standard deviation and remarks.

The validators strongly agree that the language used follows the medium of instruction in TLE. (M = 4.70 and SD=0.48) indicate a high level of acceptability of audio-visual content in terms of language used. On the other hand, the validators also strongly agree that the language used is suitable for the learners and language used in the audio-visual content is effectively delivered. While the mean and standard deviation are slightly lower (M = 4.50 and SD = 0.53), it still indicates a high level of acceptability of audio-visual content in terms of language used.

Table 3 Level of Acceptability of Audio-Visual Content in Terms of Language Used

The language used ...	MEAN	SD	REMARKS
...is suitable for the learners.	4.50	0.53	Strongly Agree
...is easy to understand.	4.60	0.52	Strongly Agree
...in the audio-visual content is effectively delivered.	4.50	0.53	Strongly Agree
...avoids unfamiliar words for the students.	4.60	0.52	Strongly Agree
...follows the medium of instruction in TLE.	4.70	0.48	Strongly Agree
Weighted Mean	4.58		
SD	0.51		
Verbal Interpretation	Highly Acceptable		

The level of acceptability of audio-visual content in terms of language used attained a weighted mean score of 4.58 and a

standard deviation of 0.51, verbally interpreted as *highly acceptable* among the respondents.



This implies that audio-visual is generally well-accepted by validators in terms of language used. To have an effective tool for remediation, the language used must accurately match the

proficiency level of the learners to ensure their understanding of the content in the audio-visual materials.

Table 4 Level of Acceptability of Audio-Visual Content in Terms of Inclusivity

The audio-visual material...	MEAN	SD	REMARKS
...presents lessons which are based on real-life situations.	4.30	0.48	Strongly Agree
...provides activities suited to the objectives of the lesson.	4.60	0.52	Strongly Agree
...includes exercises that assess objectively the level of knowledge of the target learners.	4.70	0.48	Strongly Agree
...takes considerations to the varying attitudes and capabilities of learners.	4.70	0.48	Strongly Agree
...is based on the K-12 curriculum.	4.60	0.52	Strongly Agree
Weighted Mean	4.58		
SD	0.50		
Verbal Interpretation	Highly Acceptable		

Table 4 shows the level of acceptability of audio-visual content in terms of inclusivity. Also shows the statements, mean, standard deviation and remarks.

The validators strongly agree that the audio-visual material includes exercises that assess objectively the level of knowledge of the target learners and the audio-visual material takes considerations to the varying attitudes and capabilities of learners. (M = 4.70 and SD=0.48) conclude a high level of acceptability of audio-visual content in terms of inclusivity. On the other hand, the validators also strongly agree that the audio-visual material presents lessons which are based on real-life situations. While the mean and standard deviation are slightly lower (M = 4.30 and SD = 0.48), it still indicates a high level of acceptability of audio-visual laboratory exercises content in terms of inclusivity.

The level of acceptability of audio-visual content in terms of inclusivity attained a weighted mean score of 4.58 and a standard deviation of 0.50, verbally interpreted as *highly acceptable* among the respondents.

This implies that audio-visual laboratory exercises are generally well-accepted by validators in terms of inclusivity. To

make audio-visual materials relevant to learners, they should cater to the diverse learning styles of individuals, ensuring that different learners are accommodated effectively.

Level of Acceptability of TLE Audio-Visual Features

The level of acceptability of audio-visual features in terms of visual effect, audio, resolution, and design was treated statistically using mean and standard deviation.

Table 5 shows the level of acceptability of audio-visual features in terms of visual effect. Also shows the statements, mean, standard deviation and remarks.

The validators agree that the visual effects like transitions, are smooth and visually appealing. (M = 4.20 and SD=0.63) conclude a high level of acceptability of audio-visual features in terms of visual effect.

On the other hand, the validators also agree that the visual effects include lighting, color grading, visual style, and similar elements, and visual effects are minimal in the audio-visual material. While the mean and standard deviation are slightly lower (M = 4.00 and SD = 0.82), it still indicates a high level of acceptability of audio-visual features in terms of visual effect.

Table 5 Level of Acceptability of Audio-Visual Features in Terms of Visual Effect

The visual effects ...	MEAN	SD	REMARKS
...include lighting, color grading, visual style, and similar elements.	4.00	0.82	Agree
...include motion graphics.	4.10	0.88	Agree
...like transitions, are smooth and visually appealing.	4.20	0.63	Agree
...are minimal in the audio-visual material.	4.00	0.82	Agree
...are relevant to the topic.	4.10	0.74	Agree
Weighted Mean	4.08		
SD	0.78		
Verbal Interpretation	Acceptable		

The level of acceptability of audio-visual features in terms of visual effect attained a weighted mean score of 4.08 and a

standard deviation of 0.78, verbally interpreted as *acceptable* among the respondents.



This implies that audio-visual is generally accepted by validators in terms of visual effect. The inclusion of visual effects enhances the appeal of audio-visual materials, a crucial factor to consider in motivating learners to engage with both listening and viewing aspects.

Table 6 shows the level of acceptability of audio-visual features in terms of audio. Also shows the statements, mean, standard deviation and remarks.

The validators strongly agree that the audio has optimal quality while minimizing file size. (M = 4.70 and SD=0.48) indicate a high level of acceptability of audio-visual features in terms of audio. On the other hand, the validators also agree that the audio levels are consistent throughout the video, and audio has no noticeable delay or out-of-sync issues. While the mean and standard deviation are slightly lower (M = 4.40 and SD = 0.52), it still indicates a high level of acceptability of audio-visual features in terms of audio.

Table 6 Level of Acceptability of Audio-Visual Features in Terms of Audio

The audio...	MEAN	SD	REMARKS
...levels are consistent throughout the video.	4.40	0.52	Strongly Agree
...ensures that speech, music, or sound effects are clear and easy to understand.	4.60	0.52	Strongly Agree
...ensures that the balance between different audio elements (such as dialogue, background music, and sound effects) is appropriate.	4.50	0.53	Strongly Agree
...has optimal quality while minimizing file size.	4.70	0.48	Strongly Agree
...has no noticeable delay or out-of-sync issues.	4.40	0.52	Strongly Agree
Weighted Mean	4.52		
SD	0.51		
Verbal Interpretation	Highly Acceptable		

The level of acceptability of audio-visual features in terms of audio attained a weighted mean score of 4.52 and a standard deviation of 0.51, verbally interpreted as *highly acceptable* among the respondents.

This implies that audio-visual is generally well-accepted by validators in terms of audio. The auditory components of audio-

visual materials are crucial features, as learners effectively grasp information when the sound is clear and consistent.

Table 7 shows the level of acceptability of audio-visual features in terms of resolution. Also shows the statements, mean, standard deviation and remarks.

Table 7 Level of Acceptability of Audio-Visual Features in Terms of Resolution

The audio-visual material...	MEAN	SD	REMARKS
...has 720 to 1080 resolution.	4.30	0.67	Strongly Agree
...does not contain blurry videos.	4.40	0.97	Strongly Agree
...ensures that the video format and codec are compatible with the intended playback devices and platforms.	4.10	0.74	Agree
...has clarity and sharpness of the video image.	4.10	0.88	Agree
...ensures that the frame rate is suitable for the content and provides smooth motion playback.	4.40	0.70	Strongly Agree
Weighted Mean	4.26		
SD	0.79		
Verbal Interpretation	Highly Acceptable		

The validators strongly agree that the audio-visual material ensures that the frame rate is suitable for the content and provides smooth motion playback. (M = 4.40 and SD=0.70) conclude a high level of acceptability of audio-visual features in terms of resolution. On the other hand, the validators agree that the audio-visual material has clarity and sharpness of the video image. While the mean and standard deviation are

slightly lower (M = 4.10 and SD = 0.88), it still indicates a high level of acceptability of audio-visual features in terms of resolution.

The level of acceptability of audio-visual features in terms of resolution attained a weighted mean score of 4.26 and a standard deviation of 0.79, verbally interpreted as *highly*



acceptable among the respondents.

This implies that audio-visual is generally well-accepted by validators in terms of resolution. High resolution in audio-visual materials enhances learners' comprehension, engagement, and retention by providing clear, detailed visuals

that facilitate understanding and captivate attention.

Table 8 shows the level of acceptability of audio-visual features in terms of design. Also shows the statements, mean, standard deviation and remarks.

Table 8 Level of Acceptability of Audio-Visual Features in Terms of Design

The audio-visual material...	MEAN	SD	REMARKS
...is generally appealing and motivating.	4.60	0.52	Strongly Agree
...uses captions that are readable.	4.40	0.52	Strongly Agree
...uses colors that fit well with the background.	4.50	0.53	Strongly Agree
...contains visual that fit the level of interest, knowledge, and skills of the target users.	4.60	0.52	Strongly Agree
...incorporates illustrations that simplify complex concepts	4.70	0.48	Strongly Agree
Weighted Mean	4.56		
SD	0.51		
Verbal Interpretation	Highly Acceptable		

The validators strongly agree that the audio-visual material incorporates illustrations that simplify complex concepts. (M = 4.70 and SD=0.48) indicate a high level of acceptability of audio-visual features in terms of design. On the other hand, the validators agree that the audio-visual material uses captions that are readable. While the mean and standard deviation are slightly lower (M = 4.40 and SD = 0.52), it still indicates a high level of acceptability of audio-visual features in terms of design.

This implies that audio-visual is generally well-accepted by validators in terms of design. Design is carefully checked and includes pictures in videos for students because visuals help them understand, remember, and stay interested. These images don't just show ideas; they also make learning more engaging by activating different senses, making it easier to grasp the topic.

Level of Students' Motivation

The level of students' motivation in terms of learning relevance, use of time management and developed self-discipline was treated statistically using mean and standard deviation.

Table 9 shows the level of student's motivation in terms of learning relevance. Also shows the statements, mean, standard deviation and remarks.

The students are motivated and engaged in the learning process using audio-visual. (M = 4.21 and SD=0.42) conclude a high level of student's motivation in terms of learning relevance. On the other hand, the students acquire the concept of computer tools using audio-visual. While the mean and standard deviation are slightly lower (M = 3.88 and SD = 0.46), it still indicates a high level of student's motivation in terms of learning relevance.

Table 9 Level of Students' Motivation in Terms of Learning Relevance

The students...	MEAN	SD	REMARKS
...are motivated and engaged in the learning process using audio-visual.	4.21	0.42	Strongly Agree
...achieve the learning objectives on hand tools in computers.	3.93	0.48	Agree
...acquire the concept of computer tools using audio-visual.	3.88	0.46	Agree
...apply their knowledge and skills in practical contexts.	3.96	0.49	Agree
...connect existing knowledge to new knowledge to facilitate relevant and meaningful learning.	4.15	0.48	Agree
Weighted Mean	4.03		
SD	0.47		
Verbal Interpretation	Observed		

The level of student's motivation in terms of learning relevance attained a weighted mean score of 4.03 and a standard deviation of 0.47, verbally interpreted as *observed* among the students.

This implies that audio-visual generally motivates students in terms of learning relevance. The audio-visual can facilitate relevant and meaningful learning. Students were able to participate with desired learning outcomes upon use of the



audio visual material.

Table 10 shows the level of student’s motivation in terms of use of time management. Also shows the statements, mean, standard deviation and remarks.

The students are actively involved and excited about the lesson during the motivation phase. The mean and standard deviation

(M = 4.17 and SD=0.34) suggests a high level of student’s motivation in terms of use of time management. On the other hand, the students understand the ideas and concepts presented during the lecture phase. While the mean and standard deviation are slightly lower (M = 3.94 and SD = 0.49), it still indicates a high level of student’s motivation in terms of learning relevance.

Table 10 Level of Students’ Motivation in Terms of Use of Time Management

The students...	MEAN	SD	REMARKS
...are actively involved and excited about the lesson during the motivation phase.	4.17	0.34	Agree
... understand the ideas and concepts presented during the lecture phase.	3.94	0.49	Agree
... complete tasks promptly during the activity phase.	3.99	0.50	Agree
... deliver their output within the specified time during the presentation phase.	4.05	0.49	Agree
... respond to all the questions during the assessment phase.	4.03	0.48	Agree
Weighted Mean	4.04		
SD	0.46		
Verbal Interpretation	Observed		

The level of student’s motivation in terms of use of time management attained a weighted mean score of 4.04 and a standard deviation of 0.46, verbally interpreted as *observed* among the students.

This implies that audio-visual provides a teaching and learning process that enables students to complete activities within the given time frame.

Table 11 shows the level of student’s motivation in terms of developed self-discipline. Also shows the statements, mean,

standard deviation and remarks.

The students consistently follow the rules and guidelines that are already set. (M = 4.12 and SD=0.39) conclude a high level of student’s motivation in terms of developed self-discipline. On the other hand, the students maintain focus and avoid distractions in using learning materials. While the mean and standard deviation are slightly lower (M = 3.93 and SD = 0.47), it still indicates a high level of student’s motivation in terms of learning relevance.

Table 11 Level of Students’ Motivation in Terms of Developed Self-Discipline

The students...	MEAN	SD	REMARKS
... consistently follow the rules and guidelines that are already set.	4.12	0.39	Agree
... maintain focus and avoid distractions in using learning materials.	3.93	0.47	Agree
... take the initiative to seek out opportunities for growth and improvement proactively.	3.96	0.50	Agree
... regularly complete assigned tasks.	3.95	0.49	Agree
... accepts feedback from the teacher to improve self-discipline and do better.	4.08	0.48	Agree
Weighted Mean	4.01		
SD	0.46		
Verbal Interpretation	Observed		

The level of student’s motivation in terms of use of developed self-discipline attained a weighted mean score of 4.01 and a standard deviation of 0.46, verbally interpreted as *observed* among the students.

This implies that audio-visual materials help students develop self-discipline, allowing them to understand lessons better by cultivating good habits in following classroom rules.

The level of student’s performance in written test in terms of formative test and summative test was treated statistically using frequency and percentage.

The table 12 shows level of student’s performance in written test in terms of formative test and summative test. Additionally, shows the frequency, percentage, and remarks.

Student’s Performance



Table 12 Level of Students' Performance

Scores	Formative Test		Remarks	Scores	Summative Test		Remarks
	Frequency	Percentage			Frequency	Percentage	
21-25	2	5.00%	Outstanding	21-25	40	100.00%	Outstanding
16-20	35	87.50%	Very Satisfactory	16-20	0	0.00%	Very Satisfactory
11-15	3	7.50%	Satisfactory	11-15	0	0.00%	Satisfactory
6-10	0	0.00%	Fairly Satisfactory	6-10	0	0.00%	Fairly Satisfactory
0-5	0	0.00%	Did not meet expectation	0-5	0	0.00%	Did not meet expectation

Weighted Mean 18.38
SD 1.76
Verbal Interpretation Very Satisfactory

In terms of formative test, Out of 40 respondents, the scores "16-20" received the highest frequency, with thirty-five (35) respondents, accounting for 87.50% of the total sample population. This was followed by the scores "11-15" with a frequency of three (3) respondents, comprising 7.50% of the total sample population. Meanwhile, the scores "0-5 and 6-10" received zero (0) respondent, making up 0.00% of the total sample population.

The level of students' performance in written test in terms of formative test attained a weighted mean score of 18.38 and a standard deviation of 1.76 and was *very satisfactory* among the respondents.

While in terms of summative test, out of 40 respondents, the scores "21-25" received the all frequency 100.00% of the total sample population.

And the level of students' performance in the summative test in terms of control group attained a weighted mean score of 22.93

22.93
 1.07
 Outstanding

and a standard deviation of 1.07 and was *outstanding* among the respondents.

Furthermore, the students formative tests and other written performances results significantly improved upon use of audio materials in T.L.E. Student also actively participated and showed more interest in their daily lessons.

Test of Significant Effect of Audio-Visual Content on the Students' Motivation

To test the significant effect of audio-visual content and features on the students' motivation among Grade 7 students in terms of learning relevance, use of time management and developed self-discipline was treated statistically using Jamovi using the regression analysis.

The table showed the unstandardized coefficients, standardized coefficients, t-values, and p-values for each predictor variable. The analysis included three predictor variables: objectives, sequence, language used and inclusivity.

Table 13 Significant Effect of Audio-Visual Laboratory Exercises Content on the Students' Motivation

Learning Relevance	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	4.425	0.557		7.941	<.001
Objectives	-0.024	0.074	-0.075	-0.331	0.743
Sequence	-0.026	0.053	-0.096	-0.492	0.626
Language Used	0.006	0.053	0.221	0.117	0.907
Inclusivity	-0.045	0.049	-0.183	-0.926	0.361
R = .171; R ² = .0291; Adj. R ² = -0.0819, F(4, 35) = 0.262; p.900					
Use of Time Management					
(Constant)	4.142	0.574		7.209	<.001
Objectives	-0.013	0.076	-0.039	-0.176	0.861
Sequence	0.047	0.054	0.166	0.869	0.391
Language Used	-0.062	0.055	-0.209	-1.137	0.263
Inclusivity	0.007	0.050	0.028	0.147	0.884
R = .272; R ² = .0738; Adj. R ² = -0.0320, F(4, 35) = 0.697; p.599					
Developed Self-Discipline					
(Constant)	3.177	0.496		6.41	<.001
Objectives	0.153	0.066	0.493	2.31	0.027
Sequence	0.054	0.047	0.215	1.16	0.254
Language Used	-0.075	0.047	-0.281	-1.58	0.122
Inclusivity	0.058	0.043	0.251	1.35	0.187
R = .376; R ² = .141; Adj. R ² = -0.0433, F(4, 35) = 1.44; p.241					



In terms of *learning relevance*, the results further showed that 2.91% of the variance is explained by the four predictors, $F(3, 35) = 0.262, p.900$. All predictor variables, objectives ($B = -0.075, t = -0.331, p.743$), sequence ($B = -0.096, t = -0.492, p.626$), language used ($B = 0.221, t = 0.117, p.907$) and inclusivity ($B = -0.183, t = -0.926, p.907$) are not significantly affected the outcome variable.

This implies of widespread use of audio-visual materials, research findings indicate a non-significant effect on Grade 7 students' motivation concerning learning relevance. This suggests that while audio-visual content may enhance the delivery of educational material and facilitate understanding, it may not significantly impact students' motivation levels in terms of perceiving the relevance of what they are learning to their lives or future goals.

Secondly, in terms of *use of time management*, the results further showed that 7.38% of the variance is explained by the four predictors, $F(3, 35) = 0.697, p.599$. All predictor variables, objectives ($B = -0.039, t = -0.176, p.861$), sequence ($B = 0.166, t = 0.869, p.391$), language used ($B = -0.209, t = -1.137, p.263$) and inclusivity ($B = 0.028, t = 0.147, p.884$) are not significantly affected the outcome variable.

This implies the non-significant effect of audio-visual laboratory exercises content on Grade 7 students' motivation in terms of time management. Despite efforts to structure objectives, tailor content, use appropriate language, and ensure inclusivity, there was no substantial improvement in students' time management skills. Students did not exhibit noticeable enhancements in their ability to effectively manage their time when engaging with audio-visual materials.

Lastly, in terms of *developed self-discipline*, the results further showed that 14.10% of the variance is explained by the four

predictors, $F(3, 35) = 1.44, p.241$. Specially, objectives ($B = 0.493, t = 2.31, p.027$) is positively affect with students' motivation among Grade 7 students in terms of developed self-discipline. On the other hand, sequence ($B = 0.251, t = 1.16, p.254$), language used ($B = -0.281, t = -1.58, p.122$) and inclusivity ($B = 0.251, t = 1.35, p.187$) are not significantly affected the outcome variable.

This implies a positive and significant effect of audio-visual laboratory exercises content on Grade 7 students' motivation in terms of developing self-discipline. Students who engage with such content demonstrate improved goal-setting abilities, better time management skills, and increased persistence in completing tasks, leading to enhanced self-discipline.

The table showed the unstandardized coefficients, standardized coefficients, t-values, and p-values for each predictor variable. The analysis included three predictor variables: visual effect, audio, resolution, and design.

In terms of *learning relevance*, the results further showed that 2.64% of the variance is explained by the four predictors, $F(3, 35) = 0.238, p.915$. All predictor variables, visual effect ($B = 0.025, t = 0.123, p.903$), audio ($B = -0.109, t = -0.622, p.538$), resolution ($B = -0.092, t = -0.466, p.644$) and design ($B = -0.120, t = -0.525, p.603$) are not significantly affected the outcome variable.

Secondly, in terms of *use of time management*, the results further showed that 8.38% of the variance is explained by the four predictors, $F(3, 35) = 0.800, p.533$. All predictor variables, visual effect ($B = 0.060, t = 0.298, p.767$), audio ($B = -0.033, t = -0.196, p.846$), resolution ($B = 0.026, t = 0.140, p.890$) and design ($B = 0.257, t = 1.162, p.253$) are not significantly affected the outcome variable.

Table 14 Significant Effect of Audio-Visual Laboratory Exercises Features on the Students' Motivation

<i>Learning Relevance</i>	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	4.371	0.365		11.968	<.001
Visual Effect	0.004	0.035	0.025	0.123	0.903
Audio	-0.034	0.055	-0.109	-0.622	0.538
Resolution	-0.015	0.033	-0.092	-0.466	0.644
Design	-0.030	0.058	-0.120	-0.525	0.603
R = .163; R ² = .0264; Adj. R ² = -0.0848, F(4, 35) = 0.238; p.915					
<i>Use of Time Management</i>					
(Constant)	3.704	0.373		9.906	<.001
Visual Effect	0.010	0.036	0.060	0.298	0.767
Audio	-0.011	0.056	-0.033	-0.196	0.846
Resolution	0.004	0.034	0.026	0.140	0.890
Design	0.069	0.060	0.257	1.162	0.253
R = .289; R ² = .0838; Adj. R ² = -0.0209, F(4, 35) = 0.800; p.533					
<i>Developed Self-Discipline</i>					
(Constant)	3.841	0.315		12.181	<.001
Visual Effect	-0.020	0.030	-0.126	-0.659	0.514
Audio	0.030	0.047	0.104	0.647	0.522
Resolution	-0.044	0.028	-0.268	-1.546	0.131
Design	0.065	0.050	0.268	1.285	0.207
R = .435; R ² = .189; Adj. R ² = 0.0969, F(4, 35) = 2.05; p.109					



Lastly, in terms of *developed self-discipline*, the results further showed that 18.90% of the variance is explained by the four predictors, $F(3, 35) = 2.05, p.109$. All predictor variables, visual effect ($B = -0.126, t = -0.659, p.514$), audio ($B = 0.104, t = 0.647, p.522$), resolution ($B = -0.268, t = -1.546, p.131$) and design ($B = 0.268, t = 1.285, p.207$) are not significantly affected the outcome variable.

This implies a non-significant effect on students' motivation in terms of learning relevance, time management, and developed

self-discipline. This indicates that specific features such as visual effects, audio quality, resolution, and design do not significantly impact student motivation in these areas.

Test of Significant Difference between the Formative and Summative Test

The significant difference between the formative and summative test of Grade 7 students was treated statistically using Real Statistics Data Analysis Tools using the t-test for two paired samples.

Table 15 Significant Difference between the Formative and Summative Test

Test	Mean	Mean Difference	t-value	p	Cohen's d
Formative	18.48				
		4.48	34.04	<.001	5.45
Summative	22.97				(Very Large)

$df = 28$; **Significant at .01 level; Cohen's d: 0.20 (Small); 0.50 (Medium); 0.80 (Large)

The results show learning outcomes of grade 7 students had higher mean scores in the summative test ($m = 22.97$) compared to the formative test (18.48) and was observed significant since the computed p-value is larger than the level of significance at 0.05. Additionally, the mean difference is 4.48 with a t-value of 34.04. Utilizing Cohen's d statistical measure to quantify the magnitude of the difference between formative and summative test results, the analysis indicates a very large effect size. This suggests that the disparity in Grade 7 students' performance on formative versus summative tests, concerning the integration of TLE audio-visual, is not merely incidental but rather substantial and statistically significant.

Additionally, this implies the impact of audio-visual on summative test outcomes underscores the importance of incorporating diverse multimedia resources into classroom instruction to enhance student learning experiences. Educators should strategically leverage audio-visual aids to reinforce key concepts, stimulate active participation, and cater to varied learning preferences, thereby optimizing both formative and summative assessment processes for Grade 7 students.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings gathered from the study, it was found that:

1. There is no significant effect of TLE audio-visual content and features on grade 7 students' motivation. This implies that the content and features of the materials must align with the students' level to truly motivate them. Engaging videos and clear sounds tailored to their interests and comprehension level are essential to spark their motivation. Therefore, it's crucial for educators to carefully consider the content and features of audio-visual materials to effectively motivate students in their learning journey.
2. There is a significant difference between the students' performance in the formative and summative test. This implies that incorporating TLE audio-visual materials into the curriculum could significantly contribute to the overall academic success and comprehension of grade 7 students. As educators continue to explore innovative teaching methods, integrating multimedia resources like audio-visual

materials can play a pivotal role in creating dynamic and engaging learning environments.

Based on the findings and conclusion of the study, the following were hereby recommended:

1. The researcher encourages the development and utilization of audio-visual materials by teachers within the teaching and learning process, aimed at addressing learning gaps observed in specific subject areas.
2. Within the development phase of audio-visual materials, particular emphasis should be placed on enhancing or directing attention to visual effects, given their effectiveness in capturing student attention.
3. Researchers are encouraged to explore the creation of diverse interactive materials as a means to support the remediation of learning loss or to target and address identified learning gaps.

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NURTURING EPP/TLE EMOTIONAL INTELLIGENCE IN TEACHING ON TEACHERS' JOB PERFORMANCE

Mary Caryl Yvonne Hernandez Camacho
Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The research study focused on the relationship between teachers' emotional intelligence and their job performance in teaching of EPP/TLE teachers in Kalayaan Sub-Office and Lumban Sub-Office. The study aimed to determine the level of teachers' emotional intelligence, job performance and IPCRF rating. To identify the significant relationship between teachers' emotional intelligence on job performance and IPCRF rating of EPP/TLE teachers.

The study utilized quantitative research. This involved the EPP elementary public-school teachers of Kalayaan Sub-office and Lumban Sub-Office in the Division of Laguna. The total population of at least 100 teachers served as the respondents in this study. The main instrument of the study was a set of survey questionnaires which was crafted by the researcher and validated by the experts.

Based on the findings, the study revealed that teachers' emotional intelligence and teacher's job performance was very high. This shows that high emotional intelligence likely contributes to a positive learning environment, fostering better student engagement and academic performance. It also means that the achievement of students is directly impacted by their outstanding work performance. In terms of IPCRF Rating, a proportion of respondents received very satisfactory ratings on their IPCRF assessments for 2022-2023. This indicates an excellent level of performance and achievement among the evaluated individuals during this period.

Moreover, a significant relationship exists between a teacher's emotional intelligence and their job performance. This correlation indicates that as a teacher's emotional intelligence in these areas increases, so does their job performance. Thus, resulting to the rejection of the hypothesis. This means that teacher's emotional intelligence plays a vital role on teacher's job performance. However, there was no significant relationship found between teachers' emotional intelligence and their IPCRF rating in EPP/TLE teachers. Thus, resulting to acceptance of the hypothesis. This implies that other factors might be more influential in determining these ratings.

The study highlights the importance of teachers possessing high emotional intelligence as they play a crucial role in implementing the curriculum and delivering quality education. Teachers are encouraged to attend programs to improve their emotional intelligence and to assess their job performance to identify areas for improvement. School leaders are advised to provide technical assistance and professional development opportunities to teachers under their supervision to enhance their performance ratings in the IPCRF.

KEYWORDS: relationship; teachers' emotional intelligence; job performance

1. INTRODUCTION

A collection of non-cognitive skills, competencies, and abilities known as emotional intelligence (EI) affects one's ability to successfully manage demands and pressures from the environment. It consists of a set of interpersonal skills that we learn over time to help us interact with others. According to Goleman, as cited by Singh (2015), emotional intelligence is the capacity to sustain motivation and perseverance in the face of setbacks. Additionally, emotional intelligence is the capacity to restrain impulse, postpone gratification, control one's mood, and prevent anxiety from impairing thinking.

Teachers' emotional intelligence (EI) plays an important role for imparting knowledge and influencing pupils' behavior. EI reduces stress and assists instructors in dealing with difficult circumstances that arise in the classroom because of troublesome students. Teaching is not only a relational communication process, but it is also an emotional process in which students' emotions are managed and regulated to produce a good learning environment and accomplish effective teaching (Tsang & Kwong, 2017). Based on Thorndike's concepts of Social Intelligence in 1920 and Gardner's

Intrapersonal and Interpersonal Intelligence in 1994 (Rodrigues & Machado, 2019), EI refers to the ability to conduct self-emotion with others, recognize one's emotions and those of others, and reflectively control emotions (Chen & Guo, 2020).

The significance of emotional intelligence in education and teaching is prodigious. Emotional intelligence assists teachers in better understanding their pupils. Teachers might devise a pedagogical technique to identify their students' needs and create goals for them. However, the paradigm shifts in education from face-to-face instruction to distance learning and back to face-to-face delivery with flexibility presents difficulties for both teachers and students. Emotionally intelligent teachers show concern for their students and create a positive emotional climate in the classroom, both of which improve the learning environment for students and increase teachers' ability to ensure academic success. Like students, teachers' social connections with students are strengthened by their emotional intelligence, which also affects their level of comfort, self-efficacy, and job satisfaction.

It is more crucial than ever to work on classroom emotions to increase kids' academic progress or emotional development.



One would think that excellent instructors have strong emotional intelligence. Emotional intelligence predicts success in all aspects of life, and as a result, it governs all aspects of schooling. Teachers must undergo emotional intelligence training to control their own emotions and assist pupils. This demonstrates the importance of emotional intelligence for both teachers and pupils. (Singh, 2015).

In a school setting, the concept of job performance can be converted to student performance, which includes all of the behaviors that are beneficial to the learning environment. Students' actions, like those in the workplace, can be divided into three categories: counterproductive behaviors, contextual performance, and task performance. Bullying or cheating are examples of counterproductive school habits. Contextual performance refers to behaviors that contribute to the school's social and psychological atmosphere, such as assisting peers, engaging in school activities, and respecting teachers and classmates. Task performance includes completing academic work directly, participating in class, and performing well on tests and projects. Recognizing and fostering these components of student performance is critical because they influence both individual students' educational experiences and the overall success of the school community.

Further, the totality of teachers' behaviors that are thought to be valuable to organizations—whether positive or negative—is referred to as job performance. These actions fall under three general categories: counterproductivity, contextual performance, and task performance. Job performance is an extremely important factor in the workplace. Teachers perform in the field not only by teaching but also by carrying out other job-related functions. Every educational institution requires quality teachers to improve students' knowledge, skills, and overall performance. Teacher education, training, and development are means of professional advancement that encompass all developmental functions aimed at maintaining and improving their professional competence. The quality of teachers in a specific educational system contributes to the achievement of positive learning outcomes in schools. With the improved job performance teachers may address the learning gaps brought by pandemic and other related factors.

With the challenges being encountered by the teachers from the paradigm shift to the return of facet-to-face classes, particularly in Schools at Kalayaan Sub-Office and Lumban Sub-Office, it is notable that their emotional intelligence and well-being are sacrifice. This was the entry point of the researchers in pursuing this endeavor. The study was conducted to determine the level of teacher's emotional intelligence and its relationship to their job performance and their IPCRF ratings. Moreover, the results will serve as a basis in crafting a professional development plan for teachers.

1.1 Statement of the Problem

The study determined the relationship between the Kalayaan Sub-Office and Lumban Sub-Office teachers' emotional intelligence and their job performance.

1. What is the level of teachers' emotional intelligence in terms of:
 - 1.1 self-awareness;
 - 1.2 self-regulation;
 - 1.3 social awareness;
 - 1.4 empathy; and
 - 1.5 motivation?
2. What is the mean level of teachers' job performance in terms of:
 - 2.1 classroom management;
 - 2.2 adherence to curriculum;
 - 2.3 student's and parent's feedback; and
 - 2.4 instructional productivity?
3. What is the level of teachers' IPCRF performance rating?
4. Is there a significant relationship between teachers' emotional intelligence and EPP/TLE teachers job performance?
5. Is there a significant relationship between teachers' emotional intelligence and IPCRF rating of EPP/TLE teachers?

2. METHODOLOGY

This study utilized quantitative research. According to Creswell, J.W. (2018), quantitative research is the process of collecting and interpreting numerical data. It may be used to detect patterns and averages, develop hypotheses, investigate causation, and extrapolate results to bigger groups.

Further, a correlational research technique was used for the study. Descriptive research, as mentioned by McCombes (2020), aims to define a population, situation, or phenomenon precisely and methodically. It can answer the questions what, where, when, and how, but not why. A descriptive research approach allows researchers to thoroughly examine the environment of a study issue before moving on to further examination. In social science research, it can be used to study and document the nature and breadth of an issue, to uncover trends and patterns, and to act as a basis for subsequent analysis. The descriptive-correlation analysis approach will also be used. The purpose of correlational research is to uncover correlations between variables and to predict future events using prior information. It entails measuring two or more relevant variables and assessing their connections with one another (Stangor & Walinga, 2017).

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis, and interpretation of data gathered to answer the sub-problem relative to the main problem of this questions. This part discusses the findings of the study based on the research questions. This includes the significant findings of the problem statement that consists of the significant relationship between the level of teacher's procedure and qualities to the students' performance in ICT.

Level of Teachers' Emotional Intelligence

The level of teachers' emotional intelligence in terms of self-Awareness, Self-Regulation, Social Awareness, Empathy and Motivation, was treated statistically using mean and standard deviation.



Table 1 shows the Level of Teachers' Emotional Intelligence in Terms Of Self-Awareness. Also shows the statements, mean, standard deviation and remarks.

The findings present intriguing new insights on the emotional intelligence levels of the teachers based on their responses to specific remarks. The statement "instead of stressing about things I cannot control, I exert influence where I can" received the highest mean score (M=4.80, SD=0.57) from the responders. This shows that educators focus on areas where they have the most impact to take a proactive approach to stress management. Similarly, the statement "aware that suffering has

molded who I am" had a high average score (M=4.78, SD=0.63), indicating that respondents strongly agreed that their past experiences had shaped who they are today. Teachers' self-care practices could use some improvement, especially when they are stressed or tired. For instance, the statement "regularly look after myself, especially when I am fatigued" received the lowest mean score (M=4.23, SD=0.85) despite being rated as "Strongly Agree." Overall, these findings show how multifaceted emotional intelligence is in educators, pointing out both areas where teachers excel in resilience and adaptation and those that may need more attention and development.

Table 1. Level of Teachers' Emotional Intelligence in Terms of Self-Awareness

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...constantly working to improve my strengths.</i>	4.65	0.70	Strongly Agree
<i>...aware of my weaknesses, and I make every effort to overcome them.</i>	4.56	0.83	Strongly Agree
<i>...really believe that life is worthwhile.</i>	4.50	0.75	Strongly Agree
<i>...have coping mechanisms for handling intense emotions.</i>	4.41	0.78	Strongly Agree
<i>...converse to myself in a constructive manner.</i>	4.53	0.72	Strongly Agree
<i>...regularly look after myself, especially when I am fatigued.</i>	4.23	0.85	Strongly Agree
<i>...aware that suffering has molded who I am.</i>	4.78	0.63	Strongly Agree
<i>...instead of stressing about things I cannot control, I exert influence where I can.</i>	4.80	0.57	Strongly Agree
<i>...good at figuring out how to solve issues.</i>	4.60	0.80	Strongly Agree
<i>...would not characterize myself as anxious.</i>	4.75	0.56	Strongly Agree
<i>Weighted Mean</i>		4.58	
<i>SD</i>		0.72	
<i>Verbal Interpretation</i>		<i>Very High</i>	

The mean and standard deviation (M = 4.80 and SD=0.57) suggests a high level of teachers' emotional intelligence in terms of self-awareness. The teacher is good at figuring out how to solve issues have a mean of 4.60 and a standard deviation of 0.80. On the other hand, the teachers also strongly agree that regularly look after me, especially when I am fatigued. While the mean and standard deviation are slightly lower (M = 4.23 and SD = 0.85), it still indicates a high level of teachers' emotional intelligence in terms of self-awareness.

The level of teachers' emotional intelligence in terms of self-awareness attained a weighted mean score of 4.58 and a standard deviation of 0.72, verbally interpreted as *very high* among the respondents. The high level of self-awareness among the study's teachers suggests that their emotional intelligence is strong. Students' interpersonal connections, classroom dynamics, and understanding and regulation of their own emotions can all be improved by this capacity for self-awareness. It implies that teachers are adept at recognizing their own benefits, drawbacks, and emotions, which can result in

more effective teaching strategies and a friendly learning environment for students. Overall, the findings highlight how important it is for educators to incorporate self-awareness as a core component into their training in emotional intelligence.

Table 2 shows the Level of Teachers' Emotional Intelligence in Terms of Self-Regulation. Also shows the statements, mean, standard deviation and remarks.

The statement "stress levels are properly controlled" had the highest mean score (M=4.78, SD=0.46), with respondents strongly agreeing, according to the statistics. The highly agreed-upon statements "trust my instincts" and "I can build relationships at work that foster mutual support" follow, with matching mean scores of (M=4.73, SD=0.63 and SD=0.51). The statement "when under pressure, my emotions are in control" earned the lowest mean score (M=4.39, SD=0.93), but still being strongly agreed upon.



Table 2. Level of Teachers' Emotional Intelligence in Terms of Self-Regulation

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...stress levels are properly controlled.</i>	4.78	0.46	Strongly Agree
<i>...not one to shy away from controversy.</i>	4.70	0.66	Strongly Agree
<i>...opposed to being a victim of circumstances, I aim to control events.</i>	4.71	0.61	Strongly Agree
<i>...believe in my gut.</i>	4.73	0.51	Strongly Agree
<i>...can be honest about my feelings.</i>	4.49	0.77	Strongly Agree
<i>...have a favorable opinion of myself.</i>	4.72	0.65	Strongly Agree
<i>...emphasize my advantages.</i>	4.57	0.76	Strongly Agree
<i>...when under pressure, my emotions are in control.</i>	4.39	0.93	Strongly Agree
<i>...can give pain purpose.</i>	4.42	1.14	Strongly Agree
<i>...at work, I can create bonds that promote mutual support.</i>	4.73	0.63	Strongly Agree
<i>Weighted Mean</i>		4.62	
<i>SD</i>		0.71	
<i>Verbal Interpretation</i>		Very High	

The level of teachers' emotional intelligence in terms of self-regulation attained a weighted mean score of 4.62 and a standard deviation of 0.71, verbally interpreted as very high among the respondents, demonstrating their superior emotional management abilities. This shows that teachers are capable of handling challenging situations, maintaining composure, and making decisions that can be justified—all of which are essential for creating an environment where students may learn in a helpful and encouraging environment.

Table 3 shows the Level of Teachers' Emotional Intelligence in Terms of Social Awareness. Also shows the statements, mean, standard deviation and remarks.

The data reveals that the statements "easily share my insights and opinions in groups" and "easily get along with others who have different views and opinions" received the highest mean scores (M=4.73, SD=0.45 and SD=0.63 respectively), both strongly agreed upon by respondents. However, the statements

"respond appropriately to peer pressure," "in the face of conflict, I submit to the situation and try to adapt," and "good at managing group discussions" received the lowest mean scores (M=4.43, SD=0.92 and M=4.39, SD=0.93 respectively), despite still being strongly agreed upon.

The level of teachers' emotional intelligence in terms of social awareness attained a weighted mean score of 4.59 and a standard deviation of 0.76, verbally interpreted as very high among the respondents. This further means that teachers have high level of emotional intelligence considering their social awareness. This shows that teachers are adept at recognizing and comprehending the needs and feelings of others, fostering positive interactions, and creating supportive environments both within and outside of the classroom. Taken together, these findings highlight how important social awareness is to teachers' emotional intelligence and how this improves their effectiveness as mentors and teachers.

Table 3. Level of Teachers' Emotional Intelligence in Terms of Social Awareness

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...can make friends easily.</i>	4.63	0.66	Strongly Agree
<i>...easily share my insights and opinions in groups.</i>	4.73	0.45	Strongly Agree
<i>...respond appropriately to peer pressure.</i>	4.43	0.92	Strongly Agree
<i>...know how to control temper in conflict situations.</i>	4.63	0.66	Strongly Agree
<i>...accept peer's ideas and insights during collaboration.</i>	4.62	0.66	Strongly Agree
<i>...easily get along with other who have different views and opinions.</i>	4.73	0.63	Strongly Agree
<i>...can work collaboratively with my co members in the department where I belong.</i>	4.70	0.90	Strongly Agree
<i>...when I encounter a problematic situation, I find a solution by thinking about the problem from different perspectives.</i>	4.53	0.93	Strongly Agree
<i>...in the face of conflict, I submit to the situation and try to adapt.</i>	4.43	0.92	Strongly Agree
<i>...good at managing group discussions</i>	4.43	0.81	Strongly Agree
<i>Weighted Mean</i>		4.59	
<i>SD</i>		0.76	
<i>Verbal Interpretation</i>		Very High	

Table 4 shows the Level of Teachers' Emotional Intelligence in Terms of Empathy. Also shows the statements, mean, standard deviation and remarks.

The highest mean score (M=4.73, SD=0.63) indicates that respondents highly agreed with the statement "quick to spot when someone in a group is feeling awkward or



uncomfortable." This shows that to foster understanding and empathy in group settings, educators must be highly aware of social cues and adept at responding to them. On the other hand, although still highly agreed upon, the statement "often find it difficult to judge if something is rude or polite" received the lowest mean score (M=4.43, SD=1.02). This shows that although educators are skilled at identifying discomfort or embarrassment in others, they could struggle to understand the subtleties of social graces. Overall, these results indicate both instructors' strengths and potential areas for improvement, underscoring the complexity of social awareness within the context of emotional intelligence.

The level of teachers' emotional intelligence in terms of empathy attained a weighted mean score of 4.61 and a standard deviation of 0.74, verbally interpreted as very high among the respondents. This shows that teachers are empathetic toward their coworkers, students, and fellow educators, which fosters good relationships and a supportive learning environment. Taken together, these findings highlight how important empathy is to teachers' emotional intelligence and how it helps them better fulfill the diverse needs and experiences of their students.

Table 4. Level of Teachers' Emotional Intelligence in Terms of Empathy

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...can easily tell if someone else wants to enter a conversation.</i>	4.53	0.63	Strongly Agree
<i>...really enjoy caring for other people.</i>	4.63	0.66	Strongly Agree
<i>...often find it difficult to judge if something is rude or polite.</i>	4.43	1.03	Strongly Agree
<i>...in a conversation, I tend to focus not only on my own thoughts but also what my listener might be thinking.</i>	4.66	0.76	Strongly Agree
<i>...can pick up quickly if someone says one thing but means another.</i>	4.63	0.66	Strongly Agree
<i>...good at predicting how someone will feel.</i>	4.56	0.77	Strongly Agree
<i>...quick to spot when someone in a group is feeling awkward or uncomfortable.</i>	4.73	0.63	Strongly Agree
<i>...can sense if I am intruding, even if the other person does not tell me.</i>	4.66	0.76	Strongly Agree
<i>...can tune into how someone else feels rapidly and intuitively.</i>	4.63	0.66	Strongly Agree
<i>...before deciding I always weigh up the pros and cons.</i>	4.63	0.66	Strongly Agree
<i>Weighted Mean</i>		<i>4.61</i>	
<i>SD</i>		<i>0.74</i>	
<i>Verbal Interpretation</i>		<i>Very High</i>	

Table 5 shows the Level of Teachers' Emotional Intelligence in Terms of Motivation. Also shows the statements, mean, standard deviation and remarks. The findings demonstrated strong agreement among respondents, with the statement "teaching is an interesting job and a noble profession" receiving the highest mean score (M=4.70, SD=0.64). This shows that

teachers have a strong sense of purpose and fulfillment in their job and view teaching as a noble and personally gratifying career. On the other hand, there was only a fair degree of agreement with the statement "my monthly salary is sufficient to meet my expenses," which received the lowest mean score (M=2.76, SD=0.74).

Table 5. Level of Teachers' Emotional Intelligence in Terms of Motivation

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...for me, teaching is a noble profession and an interesting job for me.</i>	4.70	0.64	Strongly Agree
<i>...satisfied with the support I am receiving from my workplace.</i>	4.30	1.11	Strongly Agree
<i>...monthly salary is sufficient to meet my expenses.</i>	2.76	0.74	Fairly Agree
<i>...feel comfortable with my responsibility in my workplace.</i>	4.43	0.81	Strongly Agree
<i>...enjoy much freedom in my work.</i>	4.60	0.80	Strongly Agree
<i>...enjoy collegial relationships with my fellow teachers.</i>	4.46	0.89	Strongly Agree
<i>...know that opportunities will come my way.</i>	4.53	0.81	Strongly Agree
<i>...satisfied with the recognition given by my community.</i>	4.43	0.81	Strongly Agree
<i>...motivated with the promotion opportunities available to me as teacher.</i>	4.46	0.89	Strongly Agree
<i>...often happy with the results of my performance as teacher.</i>	4.46	0.83	Strongly Agree
<i>Weighted Mean</i>		<i>4.31</i>	
<i>SD</i>		<i>0.84</i>	
<i>Verbal Interpretation</i>		<i>Very High</i>	



This suggests that even if educators find fulfillment and worth in their work, they could face financial difficulties if their pay doesn't cover all their monthly costs. Overall, these results highlight the benefits that come with becoming a teacher as well as the necessity of providing sufficient funding to support the livelihoods and general well-being of educators.

The level of teachers' emotional intelligence in terms of motivation attained a weighted mean score of 4.31 and a standard deviation of 0.84, verbally interpreted as very high among the respondents. This implies that teachers have a strong sense of intrinsic drive and are truly passionate about what they do. All things considered, these findings demonstrate the part motivation plays in teachers' emotional intelligence, bolstering their dedication, toughness, and ability to inspire and guide their pupils to succeed.

In summary, educators have a high level of emotional intelligence in several domains, including empathy, motivation,

self-discipline, and social awareness. In their field, they excel at understanding social dynamics, managing emotions effectively, empathetic communication, and maintaining internal motivation. These qualities enable them to establish deep connections with both students and colleagues, foster a positive and encouraging learning environment, and generally be more effective teachers.

Level of Teachers' Job Performance

The level of teachers' job performance in terms of classroom management, adherence to curriculum, student's and parent's feedback and instructional productiveness, was treated statistically using mean and standard deviation.

Table 6 shows the Level of Teachers' Job Performance in Terms of Classroom Management. Also shows the statements, mean, standard deviation and remarks.

Table 6. Level of Teachers' Job Performance in Terms of Classroom Management

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...get to know every student as a unique person. I establish a rapport with them via understanding and trust.</i>	4.66	0.61	Strongly Agree
<i>...develop rational detachment and patience. I am conscious of the fact that I have a choice in how I handle a distressed student.</i>	4.66	0.61	Strongly Agree
<i>...encourage a student to participate in class activities if his inattentiveness, raucous behavior, or difficult attitude is distracting to other students.</i>	4.66	0.61	Strongly Agree
<i>...like to create rules that are favorably stated so that I may educate and encourage acceptable behavior while simultaneously maintaining classroom discipline. I then practice, model, and enforce these rules.</i>	4.46	1.00	Strongly Agree
<i>...can set rules and regulations inside my classrooms and see to it that these are to develop discipline among my learners but still the classroom remains child friendly.</i>	4.56	0.77	Strongly Agree
<i>...know several teaching strategies that address the 21st century learners.</i>	4.36	0.99	Strongly Agree
<i>...am good at integrating lessons across all learning areas.</i>	4.56	0.62	Strongly Agree
<i>...teach learners out of the box, a strategy in which they can be globally competent and competitive.</i>	4.39	0.93	Strongly Agree
<i>...can handle learners with different learning styles.</i>	4.49	0.82	Strongly Agree
<i>...can utilize differentiated instructions at a time.</i>	4.49	0.82	Strongly Agree
<i>Weighted Mean</i>		4.53	
<i>SD</i>		0.78	
<i>Verbal Interpretation</i>		<i>Very High</i>	

According to the statistics, respondents strongly agreed with statements that emphasized emotional control and individualized student connection, as indicated by their highest mean score (M=4.66, SD=0.61). Teachers specifically stated that they were committed to getting to know each kid, developing a trusting relationship with them, remaining calm under pressure, and dealing with disruptive conduct in a constructive way. On the other hand, although still highly agreed upon, the statement on knowledge of teaching strategies for 21st-century learners obtained the lowest mean score (M=4.36, SD=0.99). This shows that although educators possess exceptional interpersonal and emotional intelligence,

there might be space for improvement in terms of customizing instruction to the requirements of contemporary students.

The level of teachers' job performance in terms of classroom management attained a weighted mean score of 4.53 and a standard deviation of 0.78, verbally interpreted as very high among the respondents. This shows that educators have a high level of proficiency in disciplining students, regulating their behavior, and making the most of class time.

Table 7 shows the Level of Teachers' Job Performance in Terms of Adherence to Curriculum. Also shows the statements, mean, standard deviation and remarks.



Table 7. Level of Teachers' Job Performance in Terms of Adherence to Curriculum

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...curriculum planner and the curriculum maker inside my classroom.</i>	4.56	0.62	Strongly Agree
<i>...plan well and adopt the necessary strategies align in the curriculum.</i>	4.46	0.77	Strongly Agree
<i>...know how to integrate across and within curriculum.</i>	4.46	0.77	Strongly Agree
<i>...flexible in localizing the curriculum.</i>	4.46	0.77	Strongly Agree
<i>...in times of need, I contextualize the curriculum to be applicable to my learners.</i>	4.46	0.77	Strongly Agree
<i>...make sure that curriculum innovations are aligned to the specific goals provided in the Most Essential Learning Competencies.</i>	4.39	0.93	Strongly Agree
<i>...attend LAC sessions for professional growth which may help me in enhancing the curriculum.</i>	4.39	1.03	Strongly Agree
<i>...reinforce and enhance teaching and learning following the Most Essential Learning Competencies.</i>	4.42	1.14	Strongly Agree
<i>...see to it that the Most Essential Learning Competencies were strictly followed.</i>	4.39	0.93	Strongly Agree
<i>...budget of work is considered in planning the delivery of curriculum.</i>	4.32	1.13	Strongly Agree
<i>Weighted Mean</i>		<i>4.43</i>	
<i>SD</i>		<i>0.89</i>	
<i>Verbal Interpretation</i>		<i>Very High</i>	

The term "curriculum planner and the curriculum maker inside my classroom" had the highest mean score (M=4.56, SD=0.62) among responders, indicating strong agreement, the data showed. This demonstrates that teachers take an active role in developing and implementing the curriculum in their classrooms, demonstrating creativity and a sense of pride in their instructional strategies. Conversely, the statement on considering the work budget while planning curriculum delivery received the lowest mean score (M=4.32, SD=1.13), despite still being highly agreed with. This shows that although teachers are very good at developing and executing curricula, there may be some challenges or limitations when it comes to aligning lesson plans with policies or other constraints set by the administration. Overall, these findings highlight the importance of teacher autonomy and creativity in creating curriculum, but they also highlight the need for tools and assistance to successfully implement lesson plans.

The level of teachers' job performance in terms of adherence to curriculum attained a weighted mean score of 4.43 and a standard deviation of 0.89, verbally interpreted as very high among the respondents. This implies that teachers effectively implement the curriculum's goals and objectives, ensuring that they are consistent with educational standards and objectives.

All things considered, these findings demonstrate how important curriculum adherence is to maintaining consistency and quality in the way that instruction is provided, which ultimately aids students in meeting their learning goals. An evidence-based curriculum equips students with the necessary skills and knowledge, serving as a road map for instructors and students to achieve academic success (Harve, 2023).

Table 8 shows the Level of Teachers' Job Performance in Terms of Students' and Parents' Feedback. Also shows the statements, mean, standard deviation and remarks.

Regarding the statement "conduct parent-teacher conferences in reporting the students' feedback to their parents," which had the highest mean score (M=4.61, SD=0.61), the statistics indicate that there was strong agreement among respondents. This means that to help parents and teachers develop a cooperative learning environment for their children, educators should place a high value on having open and sincere discussions with them. The statement regarding keeping remarks to significant strengths and areas for improvement, on the other hand, earned the lowest mean score (M=4.46, SD=0.89) although still being generally agreed upon. This implies that there may be some variance in the frequency with which instructors emphasize crucial aspects during feedback sessions, even if they are aware of the necessity of doing so. Overall, these findings highlight the value of precise and unambiguous feedback techniques as well as the contribution that effective parent-teacher communication makes to raising student accomplishment.

The level of teachers' job performance in terms of students' and parents' feedback attained a weighted mean score of 4.56 and a standard deviation of 0.80, verbally interpreted as very high among the respondents. This shows that to foster a supportive and upbeat relationship between the family and the school, educators place a high priority on open communication and collaboration with stakeholders. Overall, these findings highlight the importance of feedback in enhancing instructional practices and student outcomes, as well as the necessity of ongoing communication and collaboration between educators, students, and parents.



Table 8. Level of Teachers' Job Performance in Terms of Student's and Parent's Feedback

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...give immediate feedback to students when possible.</i>	4.63	0.66	Strongly Agree
<i>...focus on feedback that encourages students to think through their learning.</i>	4.56	0.77	Strongly Agree
<i>...keep feedback focused on what's important for the learner - product, process, and self-regulation</i>	4.63	0.66	Strongly Agree
<i>...restrict comments to key strengths and areas for improvement that will make the most difference.</i>	4.46	0.89	Strongly Agree
<i>...ensure students understand the feedback and give them time and opportunity to respond to it.</i>	4.56	0.77	Strongly Agree
<i>...identify something that was done well and something that needs improvement - and provide specific suggestions for how to improve.</i>	4.49	0.94	Strongly Agree
<i>...ensure the feedback provided was useful in helping the student progress in their learning.</i>	4.49	0.94	Strongly Agree
<i>...conduct parent-teacher conferences in reporting the students' feedback to their parents.</i>	4.66	0.61	Strongly Agree
<i>...inform parents regarding the commendable performances of their children.</i>	4.49	0.94	Strongly Agree
<i>...invite parents to school if their children needs more guidance and reminders for them to be better academically and behaviorally.</i>	4.59	0.82	Strongly Agree
<i>Weighted Mean</i>		4.56	
<i>SD</i>		0.80	
<i>Verbal Interpretation</i>		Very High	

Table 9 shows the Level of Teachers' Job Performance in Terms of Instructional Productiveness. Also shows the statements, mean, standard deviation and remarks.”

According to the statistics, respondents strongly agreed with statements that emphasized humility, adaptability, and ongoing learning, as indicated by their highest mean score (M=4.66, SD=0.61). Teachers specifically indicated that they were willing to take on new challenges, actively seek out trainings and seminars for personal growth, and own up to and learn from their failures. On the other hand, although they were still highly agreed upon, the statements about desire for prompt report submission and job completion had the lowest mean score (M=4.46, SD=0.89). This shows that even if flexibility and learning are instructors' top priorities, they could find it difficult to fulfill deadlines or manage several projects at once. All things considered, these results emphasize the value of adaptability, growth attitude, and responsibility in teachers' professional development. They also show how important it is to have tools and assistance.

Table 9. Level of Teachers' Job Performance in Terms of Instructional Productiveness

<i>The Teacher's...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>...have a strong desire to improve my work.</i>	4.56	0.77	Strongly Agree
<i>...accept tasks that are unfamiliar to me.</i>	4.66	0.61	Strongly Agree
<i>...when working, my attitude is optimistic.</i>	4.56	0.77	Strongly Agree
<i>...go to seminars and trainings for personal development.</i>	4.66	0.61	Strongly Agree
<i>...open to receiving coaching to hone my abilities.</i>	4.56	0.77	Strongly Agree
<i>...admit my mistakes and let others know. This serves as my learning experience.</i>	4.66	0.61	Strongly Agree
<i>...collaborate with my colleagues to achieve the common goals.</i>	4.56	0.77	Strongly Agree
<i>...prefer to prepare and submit reports on time, following the time on task scheme.</i>	4.46	0.77	Strongly Agree
<i>...see to it that I accomplish other related tasks given to me.</i>	4.46	0.77	Strongly Agree
<i>...strive to establish and keep professional ties.</i>	4.56	0.62	Strongly Agree
<i>Weighted Mean</i>		4.58	
<i>SD</i>		0.71	
<i>Verbal Interpretation</i>		Very High	

The level of teachers' job performance in terms of instructional productiveness attained a weighted mean score of 4.58 and a standard deviation of 0.71, verbally interpreted as very high among the respondents. This shows that teachers are adept at



developing and implementing teaching tactics that inspire students to engage with the material and learn in the classroom. When all is said and done, these findings demonstrate how important quality instruction is to producing great student outcomes.

Level of IPCRF Rating

The performance level of the respondents in terms of IPCRF 2022-2023, was treated statistically using frequency and percentage.

Table 10 shows the performance level of the respondents in terms of IPCRF 2022-2023. Additionally indicates frequency, percentage, and adjective rating.

The figure illustrates the performance level of the respondents in terms of IPCRF, 2022-2023 with all the respondents getting 4.16 from 2023 to 2023, which was verbally interpreted as *very satisfactory*.

Table 10. Level of the Respondents in Terms of IPCRF 2022-2023

Numerical Point Range	f	%	Adjective Rating
4.51-5.00	0	0.00	Outstanding
3.51-4.50	100	100.00	Very Satisfactory
2.51-3.50	0	0.00	Satisfactory
1.51-2.50	0	1.00	Fairly Satisfactory
1.50 and below	0	0.00	Did not meet Expectation
Total	100	100%	
Weighted Mean		4.16	
SD		0.71	
Verbal Interpretation		Very Satisfactory	

It implies the significant proportion of respondents who received "very satisfactory" ratings on their IPCRF assessments for the years 2022-2023. It emphasizes the importance of consistent interpretation, factors influencing performance, and implications for organizational outcomes. Moving forward, organizations should focus on recognizing high performers, supporting continuous development, fostering open communication, and implementing robust monitoring and evaluation mechanisms to sustain and enhance performance levels.

Test of Significant Relationship between Teacher’s Emotional Intelligence and Teacher’s Job Performance

To test the significant relationship between teacher’s emotional intelligence and EPP/TLE teacher’s job performance in terms of classroom management, adherence to curriculum, students and parent’s feedback and instructional productiveness was treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

The correlation coefficients measure the strength and direction of the relationship between teacher’s emotional intelligence and EPP/TLE teacher’s job performance. A positive correlation indicates that as teacher’s emotional intelligence increase, teacher’s job performance also tends to increase.

Correlations were computed among five teacher’s emotional intelligence on data for 100 teachers. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

The correlation coefficients range from 0.43 to 0.94, indicating a *moderate* to *very strong positive* relationship, and it was observed that there was a *significant* relationship between the teacher’s emotional intelligence in terms of self-regulation, social awareness, empathy and motivation and the teacher's job performance. This implies that as a teacher's emotional intelligence in terms of self-regulation, social awareness, empathy and motivation increases, there is an increase in the teacher’s job performance in these areas.

Table 11. Significant Relationship between teacher’s Emotional Intelligence and Teacher’s Job Performance

Emotional Intelligence (IV)	Job Performance (DV)			
	Classroom Management	Adherence to Curriculum	Student’s and Parent’s Feedback	Instructional Productiveness
self-awareness: Pearson Correlation	0.55	0.10	0.17	0.15
Significance(2-Tailed)	.591	.304	.099	.132
N	100	100	100	100
self-regulation: Pearson Correlation	0.84**	0.85**	0.80**	0.82**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	100	100	100	100
social awareness: Pearson Correlation	0.77**	0.83**	0.84**	0.85**
Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	100	100	100	100



empathy: Pearson	0.78**	0.87**	0.94**	0.94**
Correlation Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	100	100	100	100
motivation: Pearson	0.43**	0.51**	0.60**	0.58**
Correlation Significance(2-Tailed)	<.001	<.001	<.001	<.001
N	100	100	100	100

In summary, the synthesis highlights a significant positive relationship between various dimensions of emotional intelligence (self-regulation, social awareness, empathy, and motivation) and teacher job performance across multiple domains. To optimize teacher effectiveness and student outcomes, educational stakeholders should prioritize the development of emotional intelligence skills among teachers through targeted training, recruitment strategies, and supportive organizational practices.

On the other hand, the correlation coefficients range from 0.10 to 0.55, indicating a *very weak* to *moderate positive* relationship and it was observed that there was *no significant* relationship between the teacher's emotional intelligence in terms of self-awareness and the teacher's job performance. This implies that as a teacher's emotional intelligence in terms of self-awareness increases, there is no increase in the teacher's job performance in these areas.

While self-awareness is a critical component of emotional intelligence, its direct relationship with teacher job performance in areas such as classroom management, adherence to curriculum, handling feedback, and instructional productiveness appears to be non-significant in many cases.

Future research should continue to explore the complex interplay between self-awareness, other dimensions of emotional intelligence, and contextual factors to better understand their combined influence on teacher effectiveness and student outcomes.

Test of Significant Relationship between teacher's Emotional Intelligence and IPCRF Rating of EPP/TLE Teachers

To test the significant between teacher's emotional intelligence and IPCRF rating of EPP/TLE teachers was treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

The correlation coefficients measure the strength and direction of the relationship between teacher's emotional intelligence and IPCRF rating of EPP/TLE teachers. A positive correlation indicates that as teacher's emotional intelligence increase, IPCRF rating of EPP/TLE teachers also tends to increase.

Correlations were computed among five teacher's emotional intelligence on data for 100 teachers. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

Table 12. Significant Relationship between teacher's Emotional Intelligence and IPCRF Rating of EPP/TLE Teachers

Emotional Intelligence (IV)		IPCR (DV)
self-awareness: Pearson	Correlation	-0.17
	Significance(2-Tailed)	.086
	N	100
self-regulation: Pearson	Correlation	0.04
	Significance(2-Tailed)	.661
	N	100
social awareness: Pearson	Correlation	0.06
	Significance(2-Tailed)	.571
	N	100
empathy: Pearson	Correlation	0.02
	Significance(2-Tailed)	.877
	N	100
motivation: Pearson	Correlation	0.18
	Significance(2-Tailed)	.068
	N	100

The correlation coefficients range from -0.17 to 0.18, indicating a *very weak negative* to *very weak positive* relationship, and it was observed that there was *no significant* relationship between the teacher's emotional intelligence and IPCRF rating of EPP/TLE teachers. This implies that as a teacher's emotional intelligence increases, there is no increase/decrease in the IPCRF rating of EPP/TLE teachers in these areas.

While emotional intelligence is recognized as an important aspect of teacher effectiveness, its direct association with

IPCRF ratings in this specific teaching domain appears to be *non-significant*. Future research should explore alternative measures, refine evaluation criteria, and adopt contextualized approaches to better understand and leverage the role of emotional intelligence in enhancing performance outcomes for EPP/TLE teachers.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings, there was a significant relationship between a teacher's emotional intelligence, specifically in self-



regulation, social awareness, empathy, and motivation, and their job performance. This correlation indicates that as a teacher's emotional intelligence in these areas increases, so does their job performance. This means that teacher's emotional intelligence plays a vital role on teacher's job performance. Thus, resulting to the rejection of the hypothesis.

Moreover, teachers' emotional intelligence has no significant relationship to IPCRF ratings of EPP/TLE teachers. This implies that other factors might be more influential in determining these ratings. Thus, resulting to acceptance of the hypothesis.

Given the presented conclusions, the following recommendations are hereby deduced;

1. Teachers' being the curriculum implementers inside the classroom and the key players in the delivery of quality education should have the high level of emotional intelligence. It is further suggested that they may attend programs and activities that will help in improving their emotional intelligence.
2. Teachers are recommended to assess themselves in terms of their job performance since self-assessment will help them realize their strengths and weaknesses. Likewise, it is recommended that they should focus more on the areas which need improvement.
3. School heads, head teachers, and master teachers should provide technical assistance through a focus group discussion, learning action cells, and any professional development scheme to the teachers who are under their supervision for the betterment of their IPCRF performance ratings.

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STUDENTS' COPING STRATEGIES IN DEALING MATHEMATICAL ANXIETY AND THEIR PERFORMANCE IN MATHEMATICS

Niño Joseph Caidic Valenzuela

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study focuses on the effects of coping strategies to the mathematical anxiety and students' mathematics performance. This study aims to assess the level of their coping strategies, their mathematical anxiety and their performance based on grades. Also, the study seeks to determine if the coping strategies significantly affect their mathematical anxiety and performance.

The descriptive method is used in gathering the data since this research focused in describing the effects of coping strategies to the mathematical anxiety and Mathematics performance. Random sampling techniques were used to select the 316 Grade 11 Senior High School students of ACTS Computer College from different strands. The main instrument used in this research study is a researcher-made questionnaire about the coping strategies and mathematical anxiety.

There is a high level of coping strategies among Grade 11 students of ACTS Computer College. Moreover, there is also a high level of mathematical anxiety among them. As to students' mathematics grade, majority of them were advanced. Overall, the identified significant effects of the coping strategies such as creating a supportive environment, setting realistic goals, time management and relaxation techniques can lessen the mathematical anxiety of the students in terms of learning, self-concept and test anxieties. Lastly, among the coping strategies, only setting realistic goals can improve the Mathematics performance of Grade 11 students.

Based on the gathered data, it is concluded that the coping strategies such as creating supportive environment, setting realistic goals and time management significantly affect the learning anxiety of Grade 11 students while time management and relaxation techniques have significant effect to self-concept anxiety and only relaxation techniques have significant effect to test anxiety. It implies that coping strategies significantly affect the mathematical anxiety of the students. Thus, the first null hypothesis is rejected. Lastly, coping strategies do not significantly affect the Mathematics performance of selected Grade 11 students of ACTS Computer College except setting realistic goals. It gives way to accept the other null hypothesis.

Based on the findings and conclusions drawn, teachers are suggested to set realistic goal for every lesson so that the learners can attain the target goals in order for them to lessen their mathematical anxiety. Since mathematical anxieties are often experience by the learners especially in this post-pandemic era, school administrators should conduct seminars and workshops for the students and invite professionals who can lessen their fears. Also, it can help them to properly use coping strategies in dealing their anxiety.

KEYWORDS: *coping strategies; mathematical anxiety; mathematics performance*

1. INTRODUCTION

In layman's term, mathematical anxiety is characterized by fear, tense or negative feelings whenever a person faces Mathematics such as solving worded-problems, manipulating arithmetic or geometric sequences or encountering logical or evaluative situations with relation in the said field. It is a common challenge with various groups regardless of gender, age or background. From being a child up to being an adult, there are times that a person will feel this type of anxiety. From some people, the thought of numbers or equation provides an unease feeling or emotion and stress. According to Yang (2014), people who feel tension, nervousness, and fear of situations concerning math might have anxiety in the subject.

Aside from workplace, the effects of mathematical anxiety can extend into everyday life scenario and whenever math skills are required. From counting, managing personal finances up to decision-making that need math concepts, the presence of Mathematics can be a hindrance for a person to perform and

make tasks confidently. Likewise, having this anxiety can contribute to a person to have a lower self-esteem that can lead to underachievement. Furthermore, one of the biggest effects of mathematical anxiety can be found inside the classroom situations. Having this type of feeling can lead the students to avoid subjects that have Mathematics integration and if that happens, it can result to academic failure. According to Nelson (2016), more students think negatively of how they cope to their problems because most of them are getting struggles in solving problems in mathematics. Moreover, student may not study, listen to the teacher and cooperate to the class, will probably fail.

Though for some people, mathematical anxiety is just a state of mind, its impacts can be significant since it can impede one's ability to show their full potential and causing stress. As a matter of fact, Philippines had one of the lowest scores in Programme for International Student Assessment (2022) with a rank of 353rd. However, the impacts of mathematical anxiety



can be lessened in many ways. There are coping strategies that can help people to mitigate its effects. For instance, some students used strategies aimed at achieving in learning Mathematics by help seeking, trying to understand the study material and finding solutions to the problems and they are working with others.

With those being said, the researcher came up with a study that focuses on the students' coping strategies in dealing mathematical anxiety. The purpose of the study was to determine if the coping strategies used by the students significantly affect their mathematical anxiety. Also, the researcher wanted to test if those coping strategies have impacts on the Mathematics performance of the students.

1.1 Statement of the Problem

Specifically, the study sought answers to the following questions:

1. What is the level of students' coping strategies in terms of;
 - 1.1. Positive Self-Talk;
 - 1.2. Creating Supportive Environment;
 - 1.3. Setting Realistic Goals;
 - 1.4. Time Management; and
 - 1.5. Relaxation Techniques?
2. What is the level of students' mathematical anxiety in terms of:
 - 2.1. Test Anxiety;
 - 2.2. Learning Anxiety;
 - 2.3. Performance Anxiety; and
 - 2.4. Self-Concept Anxiety?
3. What is the students' performance in mathematics in terms of grades?

4. Are the students' coping strategies significantly affect their mathematical anxiety of students?

5. Are the students' coping strategies significantly affect their performance in mathematics?

2. METHODOLOGY

The research design used in the study was descriptive research, a quantitative approach, as it aims to accurately describes the effects of coping strategies in dealing mathematical anxiety and mathematics performance. According to McCombes (2022), it answers what, where, when, and how, but not why. Furthermore,

3. RESULTS AND DISCUSSION

This chapter presents the data gathered from the responses of selected Grade 11 students of ACTS Computer College. The statistical analysis of the data and the corresponding interpretation and discussion of findings are based on the order of the statement of the problem.

Students' Coping Strategies

This study sought to determine the level of coping strategies used by the selected Grade 11 students of ACTS Computer College. Additionally, this research determined if these variables have direct impact to the students' mathematical anxieties. Moreover, he sought to know if these coping strategies have effects on their mathematics performance.

The level students' coping strategies were revealed in the following tables which showed the statements, mean, standard deviation, remarks and verbal interpretation.

Table 1 shows the level of students' coping strategies in terms of positive self-talk.

Table 1 Level of Students' Coping Strategies in terms of Positive Self-Talk

I...	MEAN	SD	REMARKS
...prioritize focusing on the present circumstances and events, rather than my personal emotions or feelings.	3.06	0.52	Agree
...always tell myself that I am going to be alright when academic problems hit me.	3.10	0.64	Agree
...focus on the things that I have to do so that it can help me in achieving academic success.	3.24	0.65	Agree
...take one step at a time in dealing problems related to my grade or score in Mathematics and other subjects.	3.09	0.54	Agree
...handle difficult task to make it easier next time.	3.04	0.67	Agree
Weighted Mean		3.11	
SD		0.60	
Verbal Interpretation		High	

Table 1 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Positive Self-Talk. The statements, mean, standard deviation and remarks are also presented.

The statement ``I focus on the things that I have to do so that it can help me in achieving academic success'' got the highest weighted mean (M=3.24, SD=0.65) while the statement ``I handle difficult task to make it easier next time'' got the lowest

weighted mean (M=3.04, SD=0.67).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Positive Self-Talk gained a weighted mean score of 3.11 and a standard deviation of 0.60 and was verbally interpreted as *high* among the respondents. In summation, students highly used positive self-talk whenever feel anxiety, worries or fear. In this study, the mentioned coping strategy is a usual mechanism that learners are using in order



not to feel the anxieties in mathematics.

Table 2 shows the level of students' coping strategies in terms of creating supportive environment.

Table 2 Level of Students' Coping Strategies in terms of Creating Supportive Environment

I...	MEAN	SD	REMARKS
...see the classroom as a place where I can be myself and express my ideas without judgment.	2.84	0.69	Agree
...know that I am valued and respected, regardless of my ability, gender, sexuality, race, ethnicity, or religion.	3.15	0.52	Agree
...am challenged to achieve high expectations as well as I receive the support necessary to meet those expectations.	3.06	0.58	Agree
...have standards of behavior that are established and are consistently and equitably enforced for all.	3.06	0.53	Agree
...have teachers who get to know all students and uses that knowledge to create meaningful experiences.	3.33	0.56	Strongly Agree
Weighted Mean		3.09	
SD		0.60	
Verbal Interpretation		High	

Table 2 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Creating Supportive Environment. The statements, mean, standard deviation and remarks are also presented.

The statement "I have teachers who get to know all students and uses that knowledge to create meaningful experiences." got the highest weighted mean (M=3.33, SD=0.56) while the statement "I see the classroom as a place where I can be myself and express my ideas without judgment." got the lowest weighted mean (M=2.84, SD=0.69).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Creating Supportive Environment gained a weighted mean score of 3.09 and a

standard deviation of 0.60 and was verbally interpreted as *high* among the respondents.

In summation, supportive environment was observed on the respondents to cope up whenever they feel anxiety or encounter problems in Mathematics. It implies that teachers should be the first person who should create a supportive environment. If there is an environment in which the learners feel that they are accepted, it can motivate them to learn more and better. Additionally, a supportive environment is a place that is conducive for learning.

Moreover, table 3 shows the level of students' coping strategies in terms of setting realistic goals.

Table 3 Level of Students' Coping Strategies in terms of Setting Realistic Goals

I...	MEAN	SD	REMARKS
...set short-term goals for myself like finishing all my homework or reflective exercise.	3.10	0.49	Agree
...imagine what life would be like when I reach my goal.	3.39	0.58	Strongly Agree
...have goals that are based on my own interests and plans for the future.	3.37	0.61	Strongly Agree
...think about barriers that might get in my way when I set goals.	3.14	0.55	Agree
...consider my past successes and failures when setting a goal	3.21	0.57	Agree
Weighted Mean		3.24	
SD		0.57	
Verbal Interpretation		High	

Table 3 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Setting Realistic Goals. The statements, mean, standard deviation and remarks are also presented.

The statement "I imagine what life would be like when I reach

my goal." obtained the highest weighted mean (M=3.39, SD=0.58) while the statement "I set short-term goals for myself like finishing all my homework or reflective exercise." got the lowest weighted mean (M=3.10, SD=0.49).

The level of coping strategies of selected Grade 11 students of



ACTS Computer College in terms of Setting Realistic Goals gained a weighted mean score of 3.24 and a standard deviation of 0.57 and was verbally interpreted as *high* among the respondents.

In summation, learners set realistic goals just to cope up with

their anxiety or when they encounter problems in Mathematics. It implies that when a learner set goals that are achievable or attainable, there is a high chance that his or her anxiety can be lessen.

Table 4 shows the level of students' coping strategies in terms of time management.

Table 4 Level of Coping Strategies in terms of Time Management

I...	MEAN	SD	REMARKS
<i>...make a list of tasks to that I need accomplish each day so that I can easily finish those tasks.</i>	2.90	0.62	Agree
<i>...prioritize the tasks I have to do according to their importance and urgency.</i>	3.16	0.52	Agree
<i>...have some time during each day when I can work uninterrupted.</i>	2.98	0.60	Agree
<i>...do the most important tasks at my best time during the day and when I have free time.</i>	3.17	0.57	Agree
<i>...prepare time blocking so that I can avoid procrastination.</i>	2.88	0.59	Agree
Weighted Mean		3.02	
SD		0.59	
Verbal Interpretation		High	

Table 4 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Time Management. The statements, mean, standard deviation and remarks are also presented.

The statement *"I do the most important tasks at my best time during the day and when I have free time."* got the highest weighted mean (M=3.17, SD=0.57) while the statement *"I prepare time blocking so that I can avoid procrastination."* got the lowest weighted mean (M=2.88, SD=0.59).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Time Management gained a weighted mean score of 3.02 and a standard deviation of 0.59 and was verbally interpreted as *high* among the respondents.

In summation, time management is one of the coping strategies used by the respondents just to deal with their anxiety or when they encounter problems in Mathematics.

Table 5 shows the level of students' coping strategies in terms of relaxation techniques.

Table 5 Level of Coping Strategies in terms of Relaxation Techniques

I...	MEAN	SD	REMARKS
<i>...in hale peace and exhale worry so I can free up my mind.</i>	3.20	0.59	Agree
<i>...always get enough sleep for me to relax after a long day.</i>	2.67	0.81	Agree
<i>...listen to music whenever I feel stress so that I can feel relief.</i>	3.39	0.61	Strongly Agree
<i>...spend my time outside when I find myself in a difficult situation,</i>	2.89	0.83	Agree
<i>...exercise regularly because it is one of my relaxation techniques.</i>	2.68	0.77	Agree
Weighted Mean		2.97	
SD		0.78	
Verbal Interpretation		High	

Table 5 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Relaxation Techniques. The statements, mean, standard deviation and remarks are also presented.

The statement *"I listen to music whenever I feel stress so that I can feel relief."* obtained the highest weighted mean (M=3.39, SD=0.61) while the statement *"I always get enough sleep for me to relax after a long day."* got the lowest weighted mean (M=2.67, SD=0.81).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Relaxation Techniques gained a weighted mean score of 2.97 and a standard deviation of 0.78 and was verbally interpreted as *high* among the respondents.

In summation, respondents are using their own relaxation technique as one of the coping strategies to deal with their anxiety or when they encounter problems in Mathematics. It implies that their anxiety especially in mathematics can be lessen using relaxation technique.



Level of Students' Mathematical Anxiety

The level students' mathematical anxiety was revealed in the following tables which showed the statements, mean, standard

deviation, remarks and verbal interpretation.

Moreover, table 6 shows the level of students' mathematical anxiety in terms of test anxiety.

Table 6 Level of Mathematical Anxiety in Terms of Test Anxiety

I...	MEAN	SD	REMARKS
<i>...have visible signs of nervousness such as sweaty palms, shaky hands right before a test.</i>	3.00	0.80	Often
<i>...do not know any of the answers whenever I skim or read through the given test.</i>	2.61	0.74	Often
<i>...have trouble sleeping the night before a test, quiz or examination because I am overthinking if I can pass it.</i>	2.94	0.83	Often
<i>...make mistakes on easy questions or put answers in the wrong places.</i>	3.09	0.68	Often
<i>...literally feel nauseated before a test because of its content I cannot answer.</i>	2.82	0.72	Often
Weighted Mean		2.89	
SD		0.77	
Verbal Interpretation		High	

Table 6 illustrates the level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Test Anxiety. The statements, mean, standard deviation and remarks are also presented.

The level of mathematical anxiety of selected grade 11 students of ACTS Computer College in terms of Test Anxiety gained a weighted mean score of 2.89 and a standard deviation of 0.77 and was verbally interpreted as *high* among the respondents.

The statement ‘‘*I make mistakes on easy questions or put answers in the wrong places.*’’ obtained the highest weighted mean (M=3.09, SD=0.68) while the statement ‘*do not know any of the answers whenever I skim or read through the given test.*’’ got the lowest weighted mean (M=2.61, SD=0.74).

It implies that the respondents often experience mathematical anxiety especially during examination or quizzes that made them feel test anxiety.

Table 7 shows the level of students' mathematical anxiety in terms of learning anxiety.

Table 7 Level of Mathematical Anxiety in terms of Learning Anxiety

I...	MEAN	SD	REMARKS
<i>...feel worry at the work assigned by the instructor due to the less time period.</i>	3.06	0.53	Often
<i>...have fear when the teacher gives too little time to present my mathematical work.</i>	3.03	0.66	Often
<i>...experience uneasiness when the teachers simultaneously dictate several subjects and is similarly due to date.</i>	3.03	0.58	Often
<i>...feel nervous when my teacher introduces some teacher-taught applications because I have never used these before.</i>	2.90	0.64	Often
<i>...have worries in the field of understanding of the content of Mathematics.</i>	2.93	0.71	Often
Weighted Mean		2.99	
SD		0.63	
Verbal Interpretation		High	

Table 7 illustrates the level of mathematical anxiety of selected grade 11 students of ACTS Computer College in terms of Learning Anxiety. The statements, mean, standard deviation and remarks are also presented.

The level of mathematical anxiety of selected grade 11 students of ACTS Computer College in terms of Learning Anxiety gained a weighted mean score of 2.99 and a standard deviation of 0.63 and was verbally interpreted as *high* among the respondents.

The statement ‘‘*I feel worry at the work assigned by the instructor due to the less time period.*’’ obtained the highest weighted mean (M=3.06, SD=0.53) while the statement ‘‘*I feel nervous when my teacher introduces some teacher-taught applications because I have never used these before.*’’ got the lowest weighted mean (M=2.90, SD=0.64).

It implies that the respondents often experience anxiety in learning Mathematics. The data also revealed that the participants believed they would benefit from accommodations provided by professionals who understand the detrimental impact of this type of anxiety.



Table 8 shows the level of students' mathematical anxiety in terms of performance anxiety.

Table 8 Level of Mathematical Anxiety in Terms of Performance Anxiety

I...	MEAN	SD	REMARKS
<i>...feel nervous whenever my teacher calls me for recitation.</i>	3.07	0.76	Often
<i>...sense butterflies in my stomach when I am solving math problems in front of the class.</i>	2.90	0.76	Often
<i>...feel my hands shaking when my teacher calls me to answer his/her Mathematics questions.</i>	2.90	0.80	Often
<i>...think that something went wrong when answering Mathematical questions in front.</i>	2.95	0.75	Often
<i>...am scared if my teacher calls me to answer without looking at my notes. .</i>	2.95	0.77	Often
Weighted Mean		2.95	
SD		0.77	
Verbal Interpretation		High	

Table 8 illustrates the level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Performance Anxiety. The statements, mean, standard deviation and remarks are also presented.

The statement ‘*I feel nervous whenever my teacher calls me for recitation.*’ obtained the highest weighted mean (M=3.07, SD=0.76) while the statements ‘*I sense butterflies in my stomach when I am solving math problems in front of the class.*’ and ‘*I feel my hands shaking when my teacher calls me to answer his/her Mathematics questions.*’ got the lowest weighted mean (M=2.90, SD=0.76) and (M=2.90, SD=0.80) respectively.

The level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Performance Anxiety gained a weighted mean score of 2.95 and a standard deviation of 0.77 and was verbally interpreted as *high* among the respondents.

In summation, the respondents often experience mathematical anxiety whenever they need to perform Mathematics in front of the class or in front of others.

Table 9 shows the level of students' mathematical anxiety in terms of self-concept anxiety.

Table 9 Level of Mathematical Anxiety in Terms of Self-Concept Anxiety

I...	MEAN	SD	REMARKS
<i>...feel different from most mathematics inclined people and wish I was more like them.</i>	3.07	0.70	Often
<i>...have trouble taking criticisms about mathematical ability from other people.</i>	2.86	0.71	Often
<i>...believe that I can do anything that is related to Mathematics because I trust myself.</i>	2.80	0.80	Often
<i>...rather believe on the answers of my classmates in Math than mine.</i>	2.61	0.84	Often
<i>...feel unworthy when I commit mistakes in my quizzes, activities and seat works.</i>	3.03	0.79	Often
Weighted Mean		2.87	
SD		0.79	
Verbal Interpretation		High	

Table 9 illustrates the level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Self-Concept Anxiety. The statements, mean, standard deviation and remarks are also presented.

The statement ‘*feel different from most mathematics inclined people and wish I was more like them.*’ obtained the highest weighted mean (M=3.07, SD=0.70) while the statements ‘*I rather believe on the answers of my classmates in Math than mine.*’ got the lowest weighted mean (M=2.61, SD=0.84).

The level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Self-Concept Anxiety

gained a weighted mean score of 2.87 and a standard deviation of 0.79 and was verbally interpreted as *high* among the respondents.

In summation, the respondents often experience mathematical anxiety because of what they feel or perceive on their own abilities.

Students' Mathematics Performance

Mathematics performance refers to the ability of the learners to solve worded problems and perform mathematical equations. Also, it is about the literacy of someone to compute, analyze and interpret mathematical scenarios that can be used in real-life.



Furthermore, the students' mathematics performance was revealed in the following table which showed the score, frequency, percentage, descriptive value, mean, standard deviation and verbal interpretation.

Moreover, table 10 shows the students' mathematics performance

Table 10 Students' Mathematics Performance in Terms of Grades

Score	Frequency	Percentage	Descriptive Value
90-100	157	49.7%	Advance
85-89	80	25.3%	Proficient
80-84	69	21.8%	Approaching Proficiency
75-79	10	3.2%	Developing
Below 75	0	0.0%	Beginning
n=316		100%	
Mean			88.81
SD			5.56
Interpretation			Proficient

Table 10 shows Mathematics Performance of selected Grade 11 students of ACTS Computer College in terms of Grade.

It implies that the Grade 11 students of ACTS Computer College are *Proficient* when it comes to their grades in General Mathematics.

It indicates that 157 Grade 11 respondents obtained a grade of 90-100 which is equivalent to 49.7% that can be described as *Advanced*. Moreover, 80 of the Grade 11 students have grades of 85-89 or 25.3% which can be interpreted as *Proficient*. However, 69 or 21.8% of the respondents got a grade of 80-84 which can be described as *Approaching Proficiency*. Lastly, 10 or 3.2% of the respondents have grades of 75-79 that has a descriptive value of *Developing*.

Significant Effect of Students' Coping Strategies in Mathematical Anxiety

The significant effect of coping strategies such as Positive Self-Talk, Creating Supportive Environment, Setting Realistic Goals, Time Management, Relaxation Techniques on mathematical anxiety in terms of Test Anxiety, Learning Anxiety, Performance Anxiety and Self-Concept Anxiety of students was revealed in the following table.

The mean grade in Mathematics of the selected Grade 11 students of ACTS Computer College is 88.81 which can be described as *Proficient*.

The significant effect of students' coping strategies in mathematical anxiety shows the coping strategies, mathematical anxiety, t-value and p-value.

Table 11 Students' Coping Strategies on Mathematical Anxiety

Coping Strategies	Mathematical Anxiety	t-value	p-value
Positive Self-Talk	Test Anxiety	1.45	0.148
	Learning Anxiety	0.35	0.725
	Performance Anxiety	1.41	0.160
Creating Supportive Environment	Self-Concept Anxiety	0.56	0.576
	Test Anxiety	0.04	0.966
	Learning Anxiety	1.75	0.028*
Setting Realistic Goals	Performance Anxiety	0.63	0.528
	Self-Concept Anxiety	1.77	0.077
	Test Anxiety	1.08	0.281
Time Management	Learning Anxiety	2.62	0.009*
	Performance Anxiety	0.82	0.413
	Self-Concept Anxiety	1.87	0.063
Relaxation Techniques	Test Anxiety	0.38	0.706
	Learning Anxiety	2.05	0.041*
	Performance Anxiety	0.53	0.595
	Self-Concept Anxiety	2.40	0.017*
	Test Anxiety	2.97	0.003*
	Learning Anxiety	1.07	0.286
	Performance Anxiety	0.02	0.987
	Self-Concept Anxiety	2.80	0.005*

Note: * $p < .05$.



Table 11 shows the results of the statistical analysis of the significant effect of the coping strategies used by the selected Grade 11 students of ACTS Computer College to the mathematical anxiety.

The coping strategies such as creating supportive environment, setting realistic goals and time management, all show a statistically significant positive effect on learning anxiety of the students ($p = 0.028; 0.009; 0.041$). Besides, the coping strategies such as time management and relaxation techniques, all show a statistically significant effect on students' self-concept anxiety ($p = 0.017; 0.005$). Lastly, the coping strategy relaxation techniques shows a statistically significant effect on test anxiety of the students ($p = 0.003$).

This implies that these coping strategies led to a significant effect of students' anxiety towards learning Mathematics. Moreover, time management and relaxation techniques have positive effects or can lessen the self-concept anxiety of Grade 11 students about their abilities in Mathematics. Lastly, relaxation techniques can lessen the test anxiety of Grade 11

students in terms of Mathematics.

To conclude, the identified significant effects of the coping strategies such as creating a supportive environment, setting realistic goals, time management and relaxation techniques can lessen the mathematical anxiety of the students in terms of learning, self-concept and test anxieties.

Significant Effect of Students' Coping Strategies in Mathematics Performance

To test the significant effect of students' coping strategies such as Positive Self-Talk, Creating Supportive Environment, Setting Realistic Goals, Time Management, Relaxation Techniques on the performance of Grade 11 students in Mathematics, data were treated statistically using Minitab 14 using Regression Analysis and with a margin of error of 0.05

The significant effect of students' coping strategies in mathematical anxiety was revealed in the following table which shows the coping strategies, students' mathematics performance, t-value and p-value.

Table 12 Coping Strategies in the Students' Mathematical Performance in Terms of Grades

Coping Strategies	Students' Performance	t-value	p-value
Positive Self-talk	Grade	1.12	0.264
Creating Supportive Environment		1.46	0.144
Setting Realistic Goals		2.28	0.023*
Time Management		1.10	0.271
Relaxation Techniques		1.14	0.257

Note: * $p < .05$.

Table 12 illustrates the results of the statistical analysis of the significant effect of the coping strategies used by the selected Grade 11 students of ACTS Computer College to their performance in Mathematics.

The coping strategy setting realistic goals shows a statistically significant positive effect on the mathematics performance of the students in terms of grade ($p = 0.023$). This implies that this coping strategy led to a positive significant effect on the grades of Grade 11 students in Mathematics.

To conclude, the identified significant effects of the coping strategy setting realistic goals can improve the Mathematics performance of Grade 11 students.

It implies that coping strategies do not only help to lessen the anxieties of people including mathematical anxiety. It can also improve the mathematics performance of the students. Though the other coping strategies do not significantly affect the grade of the learners, it was showed that setting a realistic goal can enhance the grades of the students that are reflections of their mathematics performance.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings, it can be concluded that: Coping strategies such as creating supportive environment, setting realistic goals and time management significantly affect the learning anxiety of Grade 11 students while time

management and relaxation techniques have significant effect to self-concept anxiety and only relaxation techniques have significant effect to test anxiety. Therefore, the null hypothesis was rejected. With that, it was concluded that the coping strategies can be used in dealing with Mathematical anxiety.

Coping strategies do not significantly affect the Mathematics performance of selected Grade 11 students of ACTS Computer College except setting realistic goals. Therefore, the null hypothesis was accepted. It implies that coping strategies cannot enhance the Mathematics performance of the learners.

Based on the findings and conclusions drawn, the following are recommended:

1. Teachers and parents are suggested to create supportive environment by encouraging the students to participate more in the class discussion and proper appraisal to the students must be observed. Also, they should set realistic goal for every lesson so that the learners can attain the target goals in order for them to lessen the anxiety that they are experiencing in the subject. Lastly, they should help the learners to prepare a time plan and guide their learners regularly about the learners' improvement.
2. Future researchers should classify the anxieties of the learners and emphasize the coping strategies they are using in order to determine the specific coping mechanism that lessen their anxiety.



3. Since mathematical anxieties are often experienced by the learners especially in this post-pandemic era, educators and school administrators should conduct seminars and workshops for the students and by inviting professionals that will lessen their fears. Also, it can help them to properly use coping strategies in dealing their anxieties.

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SCHOOL HEADS WORKPLACE EMPOWERMENT, ORGANIZATIONAL COMMITMENT TO THE TEACHERS JOB SATISFACTION AND OFFICE PERFORMANCE

Shyreene Trillana Legisma

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study aims to determine the effect of School heads workplace empowerment, organizational commitment to the teachers' job satisfaction and office performance. This study also answers the level of School Heads' workplace empowerment, the level of School Heads' organizational commitment, the level of Teachers' Job satisfaction, the level of Office Performance Commitment Rating Form (OPCRF), effect of School Heads Workplace Empowerment to the Teachers Job Satisfaction, effect of School Heads Workplace Empowerment to the Office Performance, effect of School Heads Organizational Commitment to the Teachers Job Satisfaction, and the effect of School Heads Organizational Commitment to the Office Performance.

In this study, descriptive-correlation research design was used to examine the effectiveness of School Heads Workplace Empowerment, Organizational Commitment to the Teachers Job Satisfaction and Office Performance. There are three hundred (300) randomly selected teachers and school heads from the SDO- Cabuyao City used in this study. Research-made questionnaires was used as the primary tool in this study. Random sampling was one of the simplest forms of collecting data were used in this research. In order to analyze and interpret the given data, mean, standard deviation, and pearson-r correlation was used.

Based on the findings, the level of school heads workplace empowerment and organizational commitment were "highly empowered". Also, the teacher's level of job satisfaction and Office Performance Rating Form (OPCRF) were "Very Satisfactory". Furthermore, there is a no significant effect of School Heads Workplace Empowerment to the Teachers Job Satisfaction. Also, there is a significant effect of School Heads Workplace Empowerment to the Office Performance. Moreover, there is a significant effect of School Heads Organizational Commitment to the Teachers Job Satisfaction. Lastly, there is no significant effect of School Heads Organizational Commitment to the Office Performance.

Based on the findings, it is concluded that there is no a significant effect between the school heads' workplace empowerment and teachers' job satisfaction. Thus, the hypothesis stating that "There is no a significant effect between the school heads' workplace empowerment and teachers' job satisfaction" was accepted. Meanwhile, there is a significant effect between the School Heads' Workplace Empowerment and Office performance. Thus, the hypothesis stating that "There is no significant effect between the School Heads' Workplace Empowerment and Office performance" was rejected. On the other hand, there is a significant effect between the School Heads Organizational Commitment and Teachers Job satisfaction. Thus, the hypothesis stating that "There is no significant effect between the School Heads Organizational Commitment and Teachers Job satisfaction" was rejected. Lastly, there is no a significant effect between the School Heads Organizational Commitment and Office Performance. Thus, the hypothesis stating that "There is no a significant effect between the School Heads Organizational Commitment and Office Performance" was accepted.

Based on the drawn conclusions, it is recommended that the school head may continue to invest in targeted professional development programs that align with teachers' needs and interests. Offering opportunities for continuous learning can directly impact job satisfaction; and DepEd officials and school heads may keep on with involving teachers in decision-making processes, especially on issues that directly affect their work and the school environment. This fosters a sense of belonging and investment in the school's success.

KEYWORDS: School heads workplace empowerment; organizational commitment; teachers' job satisfaction

1. INTRODUCTION

Workplace empowerment and organizational commitment are critical elements that can dramatically effect teachers' job happiness and overall school performance. Empowered teachers who feel a strong sense of connection to their organization are more likely to be content with their jobs and contribute to the success of their schools. The relationship between workplace empowerment, organizational commitment, and instructors' job happiness and office performance is complex and diverse. Empowered teachers who feel a strong sense of connection to their school may be more content with their professions, leading to enhanced teaching

performance and better student results. Conversely, teachers who lack empowerment and dedication may have reduced job satisfaction, which could negatively impact their teaching effectiveness and the overall performance of the school.

Educational institutions, like all public education sector, is facing major changes and difficulties that affect how well its leaders create and carry out policies, deal with roadblocks, and resolve problems that stand in the way of advancement. Public schools, therefore, endeavour to motivate their students to achieve their goals; the success or failure of the school is mostly



dependent on workplace management and organizational dedication.

Workplace empowerment and organizational commitment are critical elements that can dramatically effect teachers' job happiness and overall school performance. Empowered teachers who feel a strong sense of connection to their organization are more likely to be content with their jobs and contribute to the success of their schools. The relationship between workplace empowerment, organizational commitment, and instructors' job happiness and office performance is complex and diverse. Empowered teachers who feel a strong sense of connection to their school may be more content with their professions, leading to enhanced teaching performance and better student results. Conversely, teachers who lack empowerment and dedication may have reduced job satisfaction, which could negatively impact their teaching effectiveness and the overall performance of the school.

In order to create policies, set goals, assist staff in developing their abilities, and create an environment that will allow for the achievement of the intended results, the job of the educational leader is vital. The leader helps staff members improve their competencies and overcome obstacles linked to their jobs. Organizational commitment implies a more active commitment of the staff to the organization. Staff are willing to give their contribution to the wellbeing of the organization (Habib,2020). Organizational commitment is a multifaceted topic, as its definition differs across different sorts of school. As a result, it has been defined considering the research interests of scholars. But according to conventional wisdom, organizational commitment is a result of people developing a loyal bond with their organization.

In today's social and educational setting, workplace empowerment, organizational commitment, and office performance of public school heads are critical issues for a number of reasons. Initially, in the current dynamic and fast-paced workplace, companies require leaders that can encourage and inspire their staff to reach their maximum potential. Second, because it empowers people to take responsibility for their work and make a positive impact on the attainment of organizational objectives, workplace empowerment is a crucial issue in today's social and educational setting. Employees that feel empowered at work are more likely to be devoted to the company, more productive, and satisfied in their roles. Thirdly, workplace empowerment particularly relevant in the public schools in City schools' Division of Laguna, where there is a scarcity of studies exploring workplace empowerment and organizational commitment. Through this research, the Department of Education (DepEd) will be able to gather important information about the workplace empowerment, organizational commitment, teachers' job satisfaction and office performance of public school heads among their staff members and create plans for fostering an environment that encourages engagement, dedication, and creativity.

Generally, in today's social and educational context, school heads' workplace empowerment, organizational commitment to their job satisfaction, and office performance are important

issues because they offer a useful framework for understanding the traits and behaviours associated with effective leadership and for fostering workplace empowerment and organizational success. The findings of this study can be applied to the development of workplace empowerment methods in other firms.

1.1 Statement of the Problem

Specifically, the study seeks to answer to the following sub-problems:

1. What is the level of School Heads' workplace empowerment in terms of:
 - 1.1 Psychological empowerment as to:
 - 1.1.1 meaning;
 - 1.1.2 competence;
 - 1.1.3 self-determination;
 - 1.1.4 impact; and
 - 1.1.5 decision making?
 - 1.2 Structural empowerment as to:
 - 1.2.1 opportunity;
 - 1.2.2 resources;
 - 1.2.3 support;
 - 1.2.4 information; and
 - 1.2.5 policy implementation?
2. What is the level of School Heads' Organizational Commitment relative to:
 - 2.1. Affective Commitment;
 - 2.2 Continuance Commitment; and
 - 2.3 Normative Commitment?
3. What is the level of Teachers' Job satisfaction in terms of:
 - 3.1 Compensation;
 - 3.2 Recognition;
 - 3.3 Benefits and Incentives;
 - 3.4 Professional Growth; and
 - 3.5 Work Environment?
4. What is the level of Office Performance Commitment Rating Form (OPCRF)?
5. Does the School Heads Workplace Empowerment have significant effect to the Teachers Job Satisfaction?
6. Does the School Heads Workplace Empowerment have significant effect to the Office Performance?
7. Does the School Heads Organizational Commitment have significant effect to the Teachers Job Satisfaction?
8. Does the *School Heads Organizational Commitment* have significant effect to the *Office Performance*?

2. METHODOLOGY

The descriptive-correlational research design employed by the researcher, as it is the most effective research model for this study. The process of collecting, examining, and tabulating data regarding current circumstances, procedures, and practices, followed by a sufficient and precise interpretation, is known as descriptive research.

3. RESULTS AND DISCUSSION

This chapter includes the presentation, analysis, and interpretation of the data. These are presented in the tables following the sequence of the specific research problem.



The study on school leaders' workplace empowerment, organizational commitment, job happiness among teachers, and office performance is presented in this chapter. To address the research questions and evaluate the study's hypotheses, the data collected from the respondents was evaluated. The findings are provided in an organized fashion, with descriptive statistics first, then inferential statistics, then a discussion that incorporates these results with prior research as a conclusion.

This chapter's aim is to present a thorough analysis of the data gathered, providing insights into the relationship between school leaders' workplace empowerment and organizational

commitment, which in turn influences teachers' job happiness and general office performance. To improve educational leadership and school effectiveness, the study seeks to identify patterns and linkages that might guide policy and practice in educational administration. These results indicate that school heads' sense of empowerment could be further strengthened by programs designed to make their responsibilities more relevant.

Table 1 shows the psychological workplace empowerment of school heads and teachers, they received an overall weighted mean of 4.4921, which

Table 1. Level of School heads Workplace Empowerment: Meaning

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
1.1. Meaning			
a. <i>My role as a school head provides me with a sense of purpose and fulfillment.</i>	4.5098	.61048	Highly Empowered
b. <i>My job activities are personally meaningful to me.</i>	4.5295	.53765	Highly Empowered
c. <i>I derive a sense of meaning from fostering a positive and inclusive school environment.</i>	4.4902	.53837	Highly Empowered
d. <i>The sense of purpose in my role as a school head is reflected in the school's achievements.</i>	4.4685	.55202	Highly Empowered
e. <i>I derive meaning from the opportunity to create a vision for the school's future.</i>	4.4626	.56227	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4921

Overall SD: .37266

Interpretation: Highly Empowered

is regarded as "Highly Empowered." Regarding statements a, b, and c, respectively, it is said that: "My role as a school head provides me with a sense of purpose and fulfilment," " My job activities are personally meaningful to me.," and "I derive a sense of meaning from fostering a positive and inclusive school environment." acquired a weighted mean of 4.5098, 4.5295, and 4.4902, respectively, for the typical verbal interpretation of "Highly empowered."

The high mean scores for all statements show that school heads have a level of empowerment, which is indicative of a strong sense of purpose and fulfillment in their roles. This sense of purpose is essential since it probably increases their dedication, motivation, and general job happiness. One of the main components of good leadership and successful academic outcomes is the empowerment that comes from meaningful work.

Table 2. Level of School heads Workplace Empowerment: Competence

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
1.2. Competence			
a. <i>I am confident that I have the ability to perform my tasks as the school head.</i>	4.4803	.55966	Highly Empowered
b. <i>I am self-assured that I can carry out my responsibilities effectively.</i>	4.5217	.53435	Highly Empowered
c. <i>I have mastered the skills necessary for my job.</i>	4.5118	.56689	Highly Empowered



d. <i>I am well-equipped with the necessary knowledge and skills for my role as a school head.</i>	4.5394	.54793	Highly Empowered
e. <i>I participate actively trainings and support to stay current with educational trends and practices.</i>	4.4449	.61130	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4996

Overall SD: .37147

Interpretation: Highly Empowered

Table 2 displays the degree of workplace empowerment among school heads based on their perceived ability. Here, "competence" refers to the school heads' self-assessed capacity for carrying out their responsibilities successfully, as well as their mastery of the required skills and participation in continuing professional development.

As the Table 2 displayed the competence received an overall weighted mean of 4.4966 with an SD of .55966, which is regarded as "Highly Empowered". Both statements—"Highly Empowered", "I am well-equipped with the necessary knowledge and skills for my role as a school head," and "I am self-assured that I can carry out my responsibilities effectively."—had a weighted mean of 4.5217. Statement 3: "I have mastered the skills necessary for my job." likewise received a weighted mean of 4.5118, indicating that the respondent is "Highly Empowered."

The competence dimension's total mean score of 4.4996 indicates that school leaders feel highly empowered. Given the high scores for each statement, it appears that school administrators are competent, self-assured, and ready to carry out their responsibilities with effectiveness. The constant high scores in all areas of competence—from task performance assurance to active engagement in training—showcase a thorough sense of empowerment.

Since it immediately affects their capacity to successfully manage their schools and provide a positive learning environment, this high degree of perceived competence is essential for effective school leadership. School systems may guarantee that its leaders are prepared to tackle the demands of contemporary education by preserving and improving these levels of competence through focused professional development and assistance.

Table 3. Level of School heads Workplace Empowerment: Self-determination

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
1.3. Self-determination				
a. <i>I have significant autonomy in determining how I do my job.</i>		4.5315	.52265	Highly Empowered
b. <i>I can decide for myself how to get my work done.</i>		4.5335	.54108	Highly Empowered
c. <i>I have considerable opportunity for independence and freedom on how I do my job.</i>		4.6083	.53487	Highly Empowered
d. <i>I feel a sense of personal choice in selecting leadership strategies appropriate for the school.</i>		4.5394	.52962	Highly Empowered
e. <i>I am encouraged to explore innovative solutions to address the challenges encountered within the school.</i>		4.5650	.53452	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.5555

Overall SD: .34946

Interpretation: Highly Empowered

The table 3 presents the results pertaining to school heads' self-determination as a component of workplace empowerment. The freedom and independence that school administrators possess in discharging their duties and obligations is referred to as self-

determination. After 300 school heads submitted their answers, the mean scores, standard deviations (SD), and verbal interpretations for each self-determination statement were calculated.



As the table 3 presented school heads' level of self-determination is firmly placed in the "Highly Empowered" category with an overall mean score of 4.5555. The very low overall standard deviation (0.34946) suggests a high degree of agreement among participants, suggesting that the majority of school administrators have a comparable understanding of their level of empowerment with regard to self-determination.

With a mean score of 4.5315, school leaders perceive a high degree of autonomy in how they carry out their duties. The

comparatively low standard deviation indicates a high degree of agreement among the participants, indicating that most school heads hold similar views regarding their autonomy. The third statement with the highest mean score (4.6083) indicates that school heads most firmly regard the possibility for independence and freedom as a component of self-determination. The high degree of perceived empowerment is reinforced by the standard deviation, which shows consistent responses.

Table 4. Level of School heads Workplace Empowerment: Impact

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
1.4. Impact				
a. <i>I know that I have a significant impact on what happens in my school.</i>		4.5020	.56352	Highly Empowered
b. <i>I have a great deal of content over what happens in my school.</i>		4.5669	.55952	Highly Empowered
c. <i>I am aware of the influence that I have on others as a school head.</i>		4.5453	.54385	Highly Empowered
d. <i>I believe that the changes I implement contribute significantly to the school's achievement and performance.</i>		4.5335	.54832	Highly Empowered
e. <i>I actively seek ways to make a lasting and positive impact on the school community.</i>		4.5394	.53333	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.5374

Overall SD: .38689

Interpretation: Highly Empowered

The table 4 presents the results pertaining to school heads' impact as a component of workplace empowerment. As the table presented, The average score of 4.5374 indicates that principals believe they have a significant influence on how their schools are run. Being aware of one's influence is crucial for good leadership since it inspires self-assurance and prompt decision-making. There is general agreement among the school heads on this topic, as evidenced by the SD of .38689, which shows a rather tight clustering of responses around the mean. This similarity points to a common conviction about their power and authority over educational issues.

The findings clearly show that school principals have a great sense of empowerment in their positions. They believe they have considerable control, influence, and impact over the operations and culture of their schools. Effective school leadership depends on a high degree of empowerment because it promotes self-assurance, independence, and a proactive

attitude toward possibilities and problems. The respondents' consistent impressions of empowerment point to a common experience that can foster coherent and successful leadership practices throughout the educational system. Ultimately, school culture, community involvement, and performance are probably going to benefit from the high degree of empowerment among school leaders.

The table 5 disclosed the results pertaining to school heads' impact as a component of workplace empowerment. As the table presented, School strongly feel empowered to make decisions about curriculum, as evidenced by their mean score of 4.5394 and SD of .68656, which both show a rather high level of agreement among respondents. The average score of 4.5177 suggests that administrators feel empowered to make choices that impact the school's overall course. The SD (.68347) indicates that respondents' perceptions are consistent.



Table 5. Level of School heads Workplace Empowerment: Decision-making

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
1.5. Decision-making				
a. <i>I have the right and responsibility to make decisions about curriculum matters.</i>		4.5394	.68656	Highly Empowered
b. <i>I lead in making decisions related to school expenses.</i>		4.4370	.68611	Highly Empowered
c. <i>I can use my own judgment when making decisions.</i>		4.4744	.60380	Highly Empowered
d. <i>I feel empowered to make decisions that impact the overall direction of the school.</i>		4.5177	.68347	Highly Empowered
e. <i>I am encouraged to seek input from the school staff and stakeholders before making major decisions.</i>		4.4094	.64208	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4756

Overall SD: .64208

Interpretation: Highly Empowered

A significant sense of autonomy and responsibility in their professions is revealed by the analysis of school leaders' decision-making empowerment. The high overall mean score suggests that school leaders have a great sense of authority to

decide on important matters like curriculum, budget, and the overall direction of their institutions. Encouragement to get feedback from others highlights their collaborative leadership style even more.

Table 6. Level of School heads Structural Empowerment: Opportunity

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
1.2.1 Opportunity				
a. <i>Opportunities for professional development are regularly offered to enhance leadership skills.</i>		4.4567	.66772	Highly Empowered
b. <i>I have the autonomy to pursue professional development opportunities aligned with my leadership role.</i>		4.4508	.69907	Highly Empowered
c. <i>The school supports my continuous learning and growth as a school leader.</i>		4.4232	.72161	Highly Empowered
d. <i>The school has established a transparent process for decision-making and resource allocation.</i>		4.4587	.70520	Highly Empowered
e. <i>The school fosters a culture of innovation and creativity, providing opportunities to explore new ideas and initiatives.</i>		4.4154	.70412	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4409

Overall SD: .50783

Interpretation: Highly Empowered

Table 6 displays the results pertaining to school heads' opportunity as a component of workplace empowerment. As

the table displayed, school heads generally feel quite empowered, as seen by their overall mean score of 4.4409. A



high degree of consistency in the responses is seen in the overall standard deviation of 0.50783, indicating that most respondents share the perception of empowerment.

With a mean score of 4.4587, the high mean score indicates that decision-making and resource allocation transparency are highly valued. The low standard deviation of .70520 suggests that a majority of respondents concur on this facet of empowerment. The conclusion that school heads have a strong and uniformly perceived structural empowerment in terms of opportunities is supported by the high overall mean and low overall standard deviation. Their efficacy and job satisfaction are probably enhanced by this favourable opinion, which also

fosters a more vibrant and healthy learning environment.

The data provided in Table 7 assesses how structurally empowered school leaders are in terms of resources. School heads exhibit a strong sense of empowerment, as evidenced by their overall mean score of 4.4720 with an SD of 0.43560. The respondents feel "Highly Empowered," according to each statement, with mean scores constantly above 4.4. Given the high degree of perceived empowerment in resource management across a range of domains, it is likely that school administrators believe they have the power, support, and authority needed to manage resources well.

Table 7. Level of School heads Structural Empowerment: Resources

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
1.2.2 Resources			
a. <i>The school provides adequate resources (financial, human, and material) to support effective leadership.</i>	4.4744	.66271	Highly Empowered
b. <i>I have control over the allocation of resources within my school.</i>	4.4587	.67956	Highly Empowered
c. <i>Adequate staffing levels are maintained to support the school's objectives.</i>	4.4843	.63568	Highly Empowered
d. <i>I have the authority to prioritize resource allocation based on the school's needs.</i>	4.5020	.61055	Highly Empowered
e. <i>I feel empowered to advocate for additional resources when needed.</i>	4.4409	.64546	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4720

Overall SD: .43560

Interpretation: Highly Empowered

The statement of "I have the authority to prioritize resource allocation based on the school's needs", school heads feel extremely empowered about their ability to allocate resources based on priority, as evidenced by their highest mean score of 4.5020 out of all the claims. There is significant agreement on this topic, as evidenced by the standard deviation of 0.61055,

which shows the least diversity in responses. Based on the findings, there appears to be a favorable atmosphere in which school administrators were empowered to oversee and push for the resources required to achieve their institution's goals. Effective school leadership and the successful use of instructional practices depend on this empowerment.

Table 8. Level of School heads Structural Empowerment: Support

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
1.2.3 Support			
a. <i>The school leadership encourages and supports innovative ideas and practices.</i>	4.4606	.66797	Highly Empowered
b. <i>I feel empowered to propose and implement changes that enhance the quality of education.</i>	4.4744	.62912	Highly Empowered



c. <i>There is a culture of openness to new and creative approaches in our school.</i>	4.4823	.63872	Highly Empowered
d. <i>I feel supported by the school administration in my role as a school head.</i>	4.4508	.69907	Highly Empowered
e. <i>The school administration values and actively promotes a supportive culture.</i>	4.4547	.68796	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4646

Overall SD: .47294

Interpretation: Highly Empowered

Table 8 disclose how structurally empowered school leaders are in terms of support. School heads exhibit a strong sense of empowerment, as evidenced by their overall mean score of 4.4646 with an SD of 0.47294. The respondents feel "Highly Empowered," given the high degree of perceived empowerment in resource management across a range of domains, it is likely that school administrators believe they have the power, support, and authority needed to manage resources well.

The statement of "There is a culture of openness to new and creative approaches in our school", school heads feel extremely empowered about their support in creative approaches, as evidenced by their highest mean score of 4.4823 out of all the claims. There is significant agreement on this

topic, as evidenced by the standard deviation of 0.63872, which shows the least diversity in responses. With the highest mean score for this statement, school heads appear to view their institutions as having a very open attitude to new ideas. This is a generally held opinion, as indicated by the low SD.

The low standard deviations, which signify the constancy of these high results, highlight a widespread agreement among school administrators. This broad consensus indicates a strong support system in place in the schools, which creates an atmosphere where school administrators feel extremely empowered to innovate and lead.

Table 9. Level of School heads Structural Empowerment: Information

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
1.2.4 Information				
a. <i>I have access to information about budgetary allocations within the school.</i>		4.4665	.74637	Highly Empowered
b. <i>Relevant information about the school's policies and procedures is readily available to me.</i>		4.4941	.67497	Highly Empowered
c. <i>I am well-informed about decisions made at higher administrative levels that impact the school.</i>		4.4626	.74353	Highly Empowered
d. <i>I have access to comprehensive data and reports that help me make informed decisions.</i>		4.4646	.71661	Highly Empowered
e. <i>Information about student progress and academic performance is readily available to me.</i>		4.5295	.69736	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.5295

Overall SD: .45996

Interpretation: Highly Empowered

With a particular emphasis on their information availability, Table 9 data illustrates the degree of structural empowerment among school leaders. To the great extent that it is possible, this

table offers an understanding of the opinions that knowledgeable school leaders hold regarding several facets of school operations and administration.



School heads consistently and strongly perceive empowerment in relation to information availability, as evidenced by high overall mean score (4.5295) and low overall SD (0.45996). For efficient school administration, strategic planning, and decision-making, this all-inclusive information access is essential.

With access to data on student growth and academic performance, school administrators feel especially empowered, as seen by the highest mean score (4.5295). This is essential for tracking academic progress and carrying out focused interventions. The standard deviation (0.69736) shows that school leaders generally agree on the availability of this information.

A well-established system that keeps school heads informed about important aspects of school operations is shown in the high level of structural empowerment attained through information access. Their capacity to successfully run schools, adopt cutting-edge procedures, and raise the standard of instruction is supported by this degree of information availability.

Table 10 provides insights into the perceived level of structural empowerment among school heads concerning policy implementation. Based on the overall mean score 4.4331 with an SD of .48036, school heads often feel highly empowered when it comes to implementing policies in their schools. Despite being relatively modest, the standard deviation indicates some variation in the sample's responses.

Table 10. Level of School heads Structural Empowerment: Policy Implementation

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
1.2.5 Policy Implementation			
a. <i>The school provides clear guidelines for policy development and implementation.</i>	4.4331	.72259	Highly Empowered
b. <i>I am aware of the channels through which policies are communicated to the school community.</i>	4.4823	.70058	Highly Empowered
c. <i>I am encouraged to share insights and suggestions for improving existing policies.</i>	4.4685	.74645	Highly Empowered
d. <i>I actively seek feedback from school staff regarding their experiences with implemented policies.</i>	4.4370	.75236	Highly Empowered
e. <i>I am involved in decision-making processes related to policy changes within the school.</i>	4.4193	.76110	Highly Empowered

Legend: 5:00-4:21= Highly Empowered; 4:20-3:41= Empowered; 3:40-2:61=Neutral; 2:60-1:81= Less Empowered; 1:80-1:00= Not Empowered

Overall mean: 4.4331

Overall SD: .48036

Interpretation: Highly Empowered

Regarding statements b, c and d respectively, it is said that: “I am aware of the channels through which policies are communicated to the school community,” “I am encouraged to share insights and suggestions for improving existing policies,” and “I actively seek feedback from school staff regarding their experiences with implemented policies.” acquired a weighted mean of 4.4823, 4.4685, and 4.4370, respectively, for the typical verbal interpretation of “Highly empowered.”

Based on the findings, school administrators typically feel very powerful when it comes to carrying out several areas of institutional policy. They see precise guidelines for the creation and application of policies, are aware of the channels via which policies are communicated, are motivated to offer suggestions for enhancing current policies, aggressively solicit input from school personnel, and participate in the processes by which policy changes are decided. The general tendency indicates that school heads have a strong sense of empowerment when it

comes to implementing policies, even though there may be some variation in their reactions.

Measures of structural, psychological, and leadership empowerment are strongly connected with principals' capacity to fulfill their responsibilities as effective instructional leaders, according to Tsegaye (2018). Empowerment was found to be significantly influenced by three factors: leadership conduct, skill development, and transfer of authority, psychological empowerment and structural empowerment.

The data in Table 11 presents the level of school heads' organizational commitment, specifically in terms of affective commitment. As the table presented, affective commitment statements' aggregate mean of 4.4504 with a standard deviation of 0.46594, the answers appear to be reasonably consistent. The school heads' strong emotional attachment to their school and sense of belonging are indicated by the verbal interpretations



for each statement, which all come under the category of "Very High Commitment."

Table 11. Level of School Heads' Organizational Commitment: Affective

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
2.1 Affective Commitment			
a. I would be very happy to spend the rest of my career at this school.	4.4016	.72259	Very High Commitment
b. I really feel as if this school's problems are my own.	4.4783	.70058	Very High Commitment
c. I feel like I do not belong in this school.	4.4390	.74645	Very High Commitment
d. This school does not seem to be a place where I feel emotionally attached.	4.4744	.75236	Very High Commitment
e. This school has a great deal of personal meaning for me.	4.4587	.76110	Very High Commitment

Legend: 5:00-4:21= Very High Commitment; 4:20-3:41= High Commitment; 3:40-2:61=Neutral; 2:60-1:81= Moderately Commitment; 1:80-1:00= Less Committed

Overall mean: 4.4504

Overall SD: .46594

Interpretation: Very High Commitment

Table 12 shows the level of organizational commitment in terms of continuance. Based on the overall mean score 4.4394 with an SD of .53133, school heads often feel highly empowered when it comes to implementing policies in their schools. Despite being relatively modest, the standard deviation

indicates some variation in the sample's responses. The school heads have a great sense of commitment and attachment to their role, and they feel that it would be difficult to leave their job, according to the verbal interpretation for each statement, which falls under the category of "Very High Commitment."

Table 12. Level of School Heads' Organizational Commitment: Continuance

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
2.2 Continuance Commitment			
a. It would be very hard for me to leave my job at this school right now even if I wanted to.	4.4016	.72259	Very High Commitment
b. I believe that staying in your current position as a school head aligns with your long-term career goals.	4.4506	.70058	Very High Commitment
c. I feel that leaving my role as a school head would result in significant personal sacrifices.	4.4272	.74645	Very High Commitment
d. I feel a sense of obligation to remain committed to your role as a school head.	4.4232	.75236	Very High Commitment
e. One of the few negative consequences of leaving my job at this school would be the scarcity of available alternative elsewhere.	4.4961	.76110	Very High Commitment

Legend: 5:00-4:21= Very High Commitment; 4:20-3:41= High Commitment; 3:40-2:61=Neutral; 2:60-1:81= Moderately Commitment; 1:80-1:00= Less Committed

Overall mean: 4.4394

Overall SD: .53133

Interpretation: Very High Commitment



The school leaders' strong commitment to staying in their roles indicates that they are likely to do so despite possible difficulties or discontent. This has potential benefits and

drawbacks. While it can support organizational continuity and stability, it may also make it more difficult for the business to change with the times or bring in new leadership.

Table 13. Level of School Heads' Organizational Commitment: Normative

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
2.3 Normative Commitment			
a. I feel no obligation to remain with my school.	4.3957	.72259	Very High Commitment
b. Even if it were to my advantage, I do not feel it would be right to leave.	4.4213	.70058	Very High Commitment
c. I would feel guilty if I left this school now.	4.4154	.74645	Very High Commitment
d. This school deserves my loyalty.	4.4409	.75236	Very High Commitment
e. I would not leave my school right now because of my sense of obligation to it.	4.4043	.76110	Very High Commitment

Legend: 5:00-4:21= *Very High Commitment*; 4:20-3:41= *High Commitment*; 3:40-2:61=*Neutral*; 2:60-1:81= *Moderately Commitment*; 1:80-1:00= *Less Committed*

Overall mean: 4.4352

Overall SD: .58414

Interpretation: Very High Commitment

Table 13 shows the average mean score of 4.4352 suggests that school administrators possess an exceptionally high degree of normative commitment. The SD of 0.58414, which indicates that the replies are generally constant throughout the sample, lends more credence to this. In the statement "I would feel bad about leaving this school right now." These people clearly have a strong devotion to their institution and its ideals, as evidenced by their extremely high commitment score.

School heads show a very high level of normative commitment to their schools, according to the statistics in Table 13. These people appear to have a strong commitment to their schools and its ideals, as evidenced by the consistently very high commitment ratings obtained across all five items. Their answers to the above indicate that they are likely motivated by a feeling of duty, loyalty, and moral responsibility, which is why they are committed.

Table 14. Level of Teachers' Job Satisfaction: Compensation

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
3.1 Compensation			
a. I am receiving the corresponding salary grade.	4.4488	.70455	Very Satisfactory
b. I have a desirable job opportunity along with my salary.	4.4685	.68873	Very Satisfactory
c. I was provided enough supplies for my instructional materials by DepEd	4.4497	.72976	Very Satisfactory
d. I feel fairly compensated for work and effort I put into my teaching responsibilities.	4.4744	.67743	Very Satisfactory
e. The school provides opportunities for professional development, and I feel adequately compensated for participating in such activities.	4.4272	.75670	Very Satisfactory

Legend: 5:00-4:21= *Very High Satisfactory*; 4:20-3:41= *Satisfactory*; 3:40-2:61=*Neutral*; 2:60-1:81=*Fairly Satisfactory*; 1:80-1:00=*Not Satisfactory*

Overall mean: 4.4538

Overall SD: .54140

Interpretation: Very Satisfactory



Table 14 presents the level of teachers' job satisfaction in terms of compensation. In terms of pay, teachers' job satisfaction is quite excellent, as indicated by the overall mean of 4.4538. The SD of 0.54140, which indicates that the replies are generally consistent across the sample, lends additional support to this. Teachers appear to feel they are being appropriately compensated for their work and that their compensation package matches with their professional development objectives and career goals, based on the very satisfactory mean ratings that are consistently found across all five assertions.

The results of this study have significant ramifications for school administrators and lawmakers who make decisions about education. A teacher's job happiness can be increased by making sure they receive fair compensation, have access to sufficient resources, and opportunities for professional development. This can ultimately improve student outcomes. To make sure that teachers' demands are being satisfied, school administrators should periodically assess their remuneration policies and ask for input from the teaching staff.

Table 15. Level of Teachers' Job Satisfaction: Recognition

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
3.2 Recognition			
a. <i>My contributions in the school's progress and development are recognized.</i>	4.4606	.72189	Very Satisfactory
b. <i>I feel appreciated by students and parents for my teaching efforts.</i>	4.5217	.66582	Very Satisfactory
c. <i>The school implement a formal recognition program that have a positive effect on teacher morale and job satisfaction.</i>	4.5059	.68079	Very Satisfactory
d. <i>The school administration appreciates the efforts of teachers in promoting student success.</i>	4.4449	.72359	Very Satisfactory
e. <i>Teachers are acknowledged during school events and meetings.</i>	4.4241	.74895	Very Satisfactory

Legend: 5:00-4:21= Very High Satisfactory; 4:20-3:41= Satisfactory; 3:40-2:61=Neutral; 2:60-1:81=Fairly Satisfactory; 1:80-1:00=Not Satisfactory

Overall mean: 4.4717

Overall SD: .54122

Interpretation: Very Satisfactory

The information in Table 15 illustrates how satisfied instructors are with their jobs in terms of acknowledgment. The standard deviation (SD) of 0.54122 and the overall mean of 4.4717 indicate that instructors are quite happy with the praise they get from their school and peers. This is demonstrated by the fact that educators are acknowledged at school functions and meetings and that parents and students feel valued for the lessons they have taught. The teachers' high degree of job satisfaction in terms of recognition is further supported by their perception that their contributions to the growth and

development of the school are acknowledged.

The findings of this study also suggest that schools should prioritize providing recognition to teachers as a means of increasing job satisfaction. This can be achieved through various strategies, such as implementing formal recognition programs, providing opportunities for teachers to receive recognition during school events and meetings, and ensuring that teachers feel their contributions are recognized and valued by the school community.

Table 16. Level of Teachers' Job Satisfaction: Benefits and Incentives

Respondents (n=300)	Mean	SD	Verbal Interpretation
Statement			
3.3 Benefits and Incentives			
a. <i>I am provided with the support necessary for accomplishing assigned tasks.</i>	4.5273	.60270	Very Satisfactory
b. <i>I am allowed to file application for leave.</i>	4.4834	.66215	Very Satisfactory
c. <i>The school provides clear information about available incentives.</i>	4.5039	.64105	Very Satisfactory



d. <i>The availability of performance-based incentives motivates me to improve as an educator.</i>	4.5195	.61585	Very Satisfactory
e. <i>The school offers a variety of incentives that recognize and appreciate teachers' efforts.</i>	4.5078	.65011	Very Satisfactory

Legend: 5:00-4:21= Very High Satisfactory; 4:20-3:41= Satisfactory; 3:40-2:61=Neutral; 2:60-1:81=Fairly Satisfactory; 1:80-1:00=Not Satisfactory

Overall mean: 4.5085

Overall SD: .51242

Interpretation: Very Satisfactory

The information in Table 16 discloses satisfied instructors are with their jobs in terms of acknowledgment. As the table disclosed the overall mean of 4.5085 indicates that teachers have a very satisfactory level of job satisfaction in terms of benefits and incentives. This is further supported by the SD of 0.51242. This implies that educators are quite pleased with the perks and rewards offered by their institution. A low SD indicates that most teachers are about the same in terms of how satisfied they are with the perks and rewards that their school provides.

Through an examination of the individual statements, we can observe that instructors are especially happy with the assistance they get in completing tasks that have been allocated to them (mean = 4.5273) and the availability of performance-based incentives that spur them on to become better teachers (mean = 4.5195). Additionally, teachers feel that their school offers a variety of incentives that acknowledge and value their work, as well as clear information about available incentives (mean = 4.5039) (mean = 4.5078).

The study's conclusions have significant ramifications for legislators and school officials. Ensuring that educators receive encouragement, motivation, and acknowledgment for their work can enhance their job satisfaction, which can then result in better learning results for students. Giving teachers advantages and incentives, like performance-based rewards, leave guidelines, and transparent information about available incentives, should be a top priority for school administration.

The information in Table 17 illustrates how satisfied teachers are with their jobs in terms of professional development. In terms of professional advancement, teachers' job satisfaction is quite satisfactory, as indicated by the overall mean of 4.5535 with an SD of 0.45574. Teachers appear to feel encouraged, supported, and acknowledged for their professional development, based on the extremely satisfactory mean scores that are consistently obtained across all five categories.

Table 17. Level of Teachers' Job Satisfaction: Professional Growth

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
3.4 Professional Growth				
a. <i>I am given a chance to excel more with my teaching job.</i>		4.5840	.55321	Very Satisfactory
b. <i>I am allowed to attend further graduate studies.</i>		4.5352	.59576	Very Satisfactory
c. <i>I am given opportunities to attend conferences and seminars relevant to my field.</i>		4.5645	.57995	Very Satisfactory
d. <i>I am satisfied with the feedback and support I receive for my professional goals.</i>		4.5449	.58515	Very Satisfactory
e. <i>The school promotes a culture of collaboration and knowledge-sharing among teachers.</i>		4.5391	.60205	Very Satisfactory

Legend: 5:00-4:21= Very High Satisfactory; 4:20-3:41= Satisfactory; 3:40-2:61=Neutral; 2:60-1:81=Fairly Satisfactory; 1:80-1:00=Not Satisfactory

Overall mean: 4.5535

Overall SD: .45574

Interpretation: Very Satisfactory

The statement that "I am given a chance to excel more with my teaching job" implies that educators believe they have plenty of chances to succeed in their roles. The data suggests that instructors are highly satisfied with this part of their employment, as evidenced by the mean score of 4.5840 and

standard deviation (SD) of 0.55321. Offering chances for professional development, such as going to conferences and seminars, going back to school for a graduate degree, and getting advice and encouragement for career objectives, should be a top priority for school administrators.



Table 18 shows the degree of job satisfaction among instructors in terms of work environment. The overall mean of 4.5359 with an SD of 0.46896 shows that teachers are fairly satisfied with their jobs in terms of professional progress. These findings corroborated a study by Malik et al. (2021), which found that instructors' satisfaction with their professional needs may be

greatly aided by the attainment of learning objectives, desired change, and the holistic development of students. By concluding, it can be claimed that the current environment necessitates identifying the factors that satisfy an educator for successful and productive work.

Table 18. Level of Teachers' Job Satisfaction: Work Environment

Statement	Respondents (n=300)	Mean	SD	Verbal Interpretation
a. <i>I feel satisfied with the safety and security measures in place at my school.</i>		4.5371	.62451	Very Satisfactory
b. <i>I feel supported by the school administration in maintaining a positive and effective work environment</i>		4.5332	.60886	Very Satisfactory
c. <i>I am satisfied with the physical conditions of classroom. (e.g., lighting, ventilation, seating arrangement)</i>		4.5362	.61847	Very Satisfactory
d. <i>The school promotes a culture of respect and professionalism in the work environment.</i>		4.5312	.57932	Very Satisfactory
e. <i>The school values diversity and ensures an inclusive environment for both teachers and students.</i>		4.5410	.60516	Very Satisfactory

Legend: 5:00-4:21= Very High Satisfactory; 4:20-3:41= Satisfactory; 3:40-2:61=Neutral; 2:60-1:81=Fairly Satisfactory; 1:80-1:00=Not Satisfactory

Overall mean: 4.5359

Overall SD: .46896

Interpretation: Very Satisfactory

Table 19. Level of Individual and Office Performance Rating Form

Respondents (n=300)	Mean	SD	Level of Performance	Performance Rating	
				Minimum	Maximum
School head Teacher	4.2038	.4560	Very Satisfactory	1.80	5.00

Legend: 5:00-4:50= Outstanding; 4:49-3:50= Very Satisfactory; 3:49-2:50=Satisfactory; 2:49-1:50= Unsatisfactory; 1:49-1:00= Poor

Based on their IPCR and OPCR findings, school heads and teachers' performance level were shown in Table 19. The results presented in Table 19 suggest that the leadership and teaching efficiency of the school heads and teachers was "Very satisfactory".

distribution and features of Performance Ratings among teachers and school heads. Although the average rating points to a "Very Satisfactory" level of performance, more research may be required to determine what causes the variety in evaluations and to pinpoint areas that could use intervention or improvement.

Using the Performance Rating (PGA) of 300 school heads and instructors, descriptive statistics are shown in the table. There is a mean of 4.2038 and a standard deviation of 0.4560 for the Performance Rating, which spans from 1.80 to 5.00. The school heads and teachers' performance appeared at "Very Satisfactory" level, according to the defined criteria, as indicated by the mean Performance Rating of 4.2038. All things considered, the descriptive statistics shed light on the

Significant Effect of School heads Workplace Empowerment on the Teachers Job Satisfaction

To determine the significant effect of the level of School heads workplace empowerment on the teachers' job satisfaction, the data gathered by the researcher were treated statistically using linear regression analysis.



Table 20. Significant Effect of School heads Workplace Empowerment on the Teachers Job Satisfaction: Compensation

Workplace Empowerment	Teachers Job Satisfaction	Beta Coefficient	t-stat	p-value	Analysis
Psychological					
Constant			1.234	.218	Not significant
• Meaning	Compensation	.122	2.613	.009	Significant
• Competence		.070	1.566	.118	Not Significant
• Self-Determination		.106	2.160	.031	Significant
• Impact		-.083	-1.633	.103	Not significant
• Decision Making		.080	1.550	.122	Not significant
Structural					
• Opportunity	Compensation	.062	1.473	.141	Not Significant
• Resources		.292	5.842	.000	Significant
• Support		-.070	-1.320	.187	Not Significant
• Information		.039	.736	.462	Not Significant
• Policy Implementation		.029	.526	.599	Not Significant
R- 0.593; R-squared 0.351; Adjusted R-squared 0.337					
Regression: Sum of Squares=50.272; df=10;F= 24.411; Sig=000					

The Multiple Linear regression was utilized to examine whether workplace empowerment influences any discernible variations in teachers job satisfaction. Additionally, the ANOVA test was used to see if there were any notable variations in how workplace empowerment affected the teachers' job satisfaction. It showed that the influence of workplace empowerment have a significant effect on teachers' job satisfaction.

The regression model's statistical significance is demonstrated by an F-value of 24.411 and a p-value of less than .001, which suggests that the predictors in the model together have a substantial impact on the dependent variable, teachers job satisfaction. This suggests that the factors that are being examined—P1, I, S, R, O, DM, I, SD, C, and M, for example—all work together to explain why participants' compensation amounts vary from one another.

The percentage of the dependent variable's variance that can be accounted for by the predictor variables is shown by the coefficient of determination, or R Square. R Square =.351 in this model indicates that the predictor variables account for about 35.1% of the variance in the dependent variable. This indicates that approximately 35.1% of the changes seen in the dependent variable may be attributed to the variables P1, I, S,

R, O, DM, I, SD, C, and M taken together. Even though R Square offers insightful information on the explanatory power of the model, it's critical to recognize that the model may not account for all potential factors influencing the dependent variable.

The degree of workplace empowerment among teachers and their degree of job satisfaction revealed a substantial correlation. It was revealed that the more satisfied teachers with their jobs. It also showed that school heads' workplace empowerment relative to psychological and structural have a big impact on teachers' job satisfaction.

With a p-value of 0.000 and a t-statistic of 4.311, the beta coefficient is 0.215. This suggests that teachers' job satisfaction is positively impacted by self-determination in a statistically meaningful way. With a p-value of 0.012 and a t-statistic of 2.529, the beta coefficient is 0.122. This shows that teachers' job satisfaction is positively impacted by impact in a statistically meaningful way.

Teachers are more satisfied with their jobs when they believe that their efforts have a good effect on the school or the students.



Table 21. Significant Effect of School heads Workplace Empowerment on the Teachers Job Satisfaction: Recognition

Workplace Empowerment	Teachers Job Satisfaction	Beta Coefficient	t-stat	p-value	Analysis
Psychological					
Constant			-1.296	.196	Not significant
• Meaning	Recognition	.051	1.106	.269	Not Significant
• Competence		.001	.013	.989	Not Significant
• Self-Determination		.215	4.311	.000	Significant
• Impact		.122	2.529	.012	significant
• Decision Making		.039	.776	.438	Not significant
Structural					
• Opportunity	Recognition	.062	1.473	.141	Not Significant
• Resources		.292	5.842	.000	Significant
• Support		-.070	-1.320	.187	Not Significant
• Information		.039	.736	.462	Not Significant
• Policy Implementation		.029	.526	.599	Not Significant
R- .607; R-squared 0.368; Adjusted R-squared 0.354 Regression: Sum of Squares=63.700; df=10;F= 26.279; Sig=000					

Self-determination and effect are two of the workplace empowerment indicators that have a major impact on teachers' job satisfaction. Resources, a predictor of structural empowerment, also has a major impact on job satisfaction. However, this analysis shows that teachers' job satisfaction is not significantly impacted by meaning, compensation, competence, decision-making, opportunity, support,

information, or the implementation of policies.

The degree and direction of the linear relationship between the predictors and the dependent variable are shown by the correlation coefficient (R). R = 0.607 in this instance indicates a somewhat strong positive connection.

Table 22. Significant Effect of School heads Workplace Empowerment on the Teachers Job Satisfaction: Benefits and Incentives

Workplace Empowerment	Teachers Job Satisfaction	Beta Coefficient	t-stat	p-value	Analysis
Psychological					
Constant			-1.296	.196	Not significant
• Meaning	Benefits and Incentives	-.007	-.143	.887	Not Significant
• Competence		.107	2.135	.033	Not Significant
• Self-Determination		.101	2.477	.014	Significant
• Impact		.134	2.789	.005	significant
• Decision Making		.068	1.316	.189	Not significant
Structural					
• Opportunity	Recognition	.130	2.456	.014	Significant
• Resources		.055	1.276	.203	Not Significant



• Support	.237	4.640	.000	Significant
• Information	.015	.282	.778	Not Significant
• Policy Implementation	-.005	-.091	.927	Not Significant

R- .607; R-squared 0.321; Adjusted R-squared 0.306
 Regression: Sum of Squares=21.341 df=10;F= 26.279; Sig=000

The statistical significance of the regression model (F = 21.341, p < 0.001) suggests that the variables together account for a portion of the variance in employee benefits. The predictors may account for about 32.1% of the variance in benefits, according to the R-squared value of 0.321. The model's adjusted R-squared, which takes the number of predictors into consideration, is marginally less at 0.306.

Employee benefits are highly influenced by the following factors: compensation, self-determination, impact, opportunity, and support, all of which exhibit significant standardized

coefficients (p < 0.05). More specifically, benefits are linked to higher levels of compensation, self-determination, impact, opportunity, and support.

Significant Effect of School heads Workplace Empowerment on the Office Performance

To determine the significant effect of the level of School heads workplace empowerment on the office performance, the data gathered by the researcher were treated statistically using linear regression analysis.

Table 23. Significant Effect of School heads Workplace Empowerment on the Office Performance

Workplace Empowerment	Office Performance	Beta Coefficient	t-stat	p-value	Analysis
Workplace					
• Psychological Empowerment	OPCRF/		2.667	0.008	Significant
• Structural Empowerment	IPCRF				

R- .627; R-squared 0.393; Adjusted R-squared 0.379
 Regression: Sum of Squares=41.453 ; df=10;F= 29.134; Sig=000

Table 23 unfolds the significant effect of school heads workplace empowerment on the office performance. As unfolded by the table, psychological and structural empowerment, there is a 2.667-unit correlation between workplace empowerment and office performance, as indicated by the beta coefficient, which measures the strength of the association. Workplace empowerment has a considerable impact on office performance, as indicated by the low p-value (0.008), which implies statistical significance. The overall significance (F-value = 29.134, p < 0.000) of the regression model supports this conclusion. R-squared (0.393) shows that workplace empowerment characteristics account for about 39.3% of the variation in office performance. Ultimately, office performance is much improved by both structural and psychological empowerment, which emphasizes how crucial it is to provide school administrators with an empowered environment to maximize organizational results. As a result, we can declare with confidence that the regression model is statistically significant and that school heads' workplace empowerment characteristics significantly affect office performance.

It was discovered that there was a multiple regression between teachers' workplace empowerment levels and their teaching performance levels, either independently or in combination, when evaluating their levels of performance in terms of meaning, benefits, and professional progress. Furthermore, an

analysis of variance (ANOVA) demonstrated a noteworthy correlation between the independent variable, workplace empowerment, and the dependent variable, teachers' performance level. This implied that workplace empowerment and the independence variable affected teachers' success as educators. Additionally, the relationship between teaching performance and structural and psychological empowerment was found to be significant.

Notably the data reveals the correlation between the office performance and workplace empowerment levels of teachers revealed that the greater the office performance, the higher the workplace empowerment level of teachers. This suggested that improving a teacher's dedication and effectiveness is one of the main motivating factors associated with their empowerment.

Significant Effect of School heads Organizational Commitment on the Teachers Job Satisfaction

To determine the significant effect of the level of School heads organizational commitment on the teachers' job satisfaction, the data gathered by the researcher were treated statistically using linear regression analysis.

Table 24 unfolds the significant effect in the school heads organizational commitment on teachers' job satisfaction. As unfolded by the table, the link between several organizational commitment elements (represented by NC, CC, and AC) and



various dimensions of job satisfaction—such as pay, benefits, recognition, and work environment—is examined in these multiple linear regression studies.

With a p-value of 0.292, the correlation coefficient (r-value) between affective commitment and compensation is 0.003. The correlation for continuing commitment is 0.30, and the p-value

is 0.003. With a p-value of 0.003 and an r-value of 0.665, the association between compensation and normative commitment is statistically significant ($p < 0.05$). These findings imply that there is a considerable correlation between remuneration and normative commitment, meaning that among teachers, higher compensation levels are linked to stronger normative commitment and continuity.

Table 24. Significant Effect of School heads Organizational Commitment on the Teachers Job Satisfaction

Teachers Job Satisfaction	Organizational Commitment			R square-value	p-value	Analysis
	Affective	Continuance	Normative			
• Compensation	.003	.292	0.30	.665	0.003	Significant
• Recognition	.011	.641	.003	.602	000	Significant
• Benefits and Incentives	.134	.603	.026	.579	0.040	Significant
• Professional Growth	0.139	0.003	0.033	.582	0.066	Significant
• Work Environment	.869	.258	.814	.627	0.008	Significant

Affective commitment and recognition have a 0.011 correlation coefficient and a non-significant p-value of 0.641. The correlation for continuance commitment is 0.003, with a 1.000 non-significant p-value. Nevertheless, with an r-value of 0.602 and a p-value of 0.000, the association between recognition and normative commitment is significant ($p < 0.05$). These results suggest that although there is a large positive link between recognition and normative commitment, there is no significant relationship between recognition and affective or continuation commitment.

However, the significance of the model ($F = 29.134, p < 0.001$), the variables together account for part of the variance in the work environment. None of the individual predictors,

notwithstanding the model's importance, significantly affects the workplace. This shows that although the predictors' combined influence accounts for a sizable portion (roughly 37.9%) of the variability seen in the workplace do not substantially influence the workplace on their own.

Significant Effect of School heads Organizational Commitment on the Office Performance

To determine the significant effect of the level of School heads organizational commitment on the teachers' job satisfaction, the data gathered by the researcher were treated statistically using linear regression analysis

Table 25. Significant Effect of School heads Organizational Commitment on the Office Performance

Organizational Commitment	Dependent Variable	Beta Coefficient	t-stat	p-value	Analysis
Constant			1.470	.142	Not Significant
• Affective Commitment	Office Performance	0.070	1.566	.118	Not Significant
• Normative Commitment		0.001	0.013	.989	Not Significant
• Continuance Commitment		0.066	1.401	.162	Not Significant

R- .634; R-squared 0.402 ; Adjusted R-squared 0.389
 Regression: Sum of Squares=45.057 ; df=10;F= 30.311; Sig=000

Table 24 presents the significant effect of the school heads organizational commitment on the Office performance. The multiple linear regression study shows that the organizational commitment of school leaders has a considerable impact on

office performance, as shown in the table. Although there was a significant overall model ($F = 30.311, p < 0.001$), office performance was not significantly impacted by the three components of organizational commitment: affective,



normative, and continuity. The number of predictors in the model is accounted for by the Adjusted R-squared value of 0.389, while the R-squared value of 0.402 shows that the predictors account for approximately 40.2% of the variance in office performance. Office performance is not significantly impacted by affective, normative, or continuation commitment alone, according to the non-significant t-statistics and beta coefficients for these components.

4. CONCLUSION AND RECOMMENDATIONS

In relation with the above-mentioned findings, the following conclusions were drawn:

1. There is no a significant effect between the school heads' workplace empowerment and teachers' job satisfaction; thus, the null hypothesis was accepted. Since the null hypothesis was accepted, it may be concluded that there is no meaningful relationship between teachers' job happiness and school leaders' workplace empowerment. This suggests that work satisfaction among teachers is not directly impacted by the empowerment of school heads.
2. There is a significant effect between the School Heads' Workplace Empowerment and Office performance; therefore, the null hypothesis was rejected. The rejection of the null hypothesis suggests that there is a noteworthy correlation between the workplace empowerment of school leaders and their office performance.
3. There is a significant effect between the School Heads Organizational Commitment and Teachers Job satisfaction; thus, the null hypothesis was rejected. The fact that the null hypothesis was rejected suggests that there is a substantial relationship between teachers' work happiness and the organizational commitment of school heads was rejected.
4. There is no a significant effect between the School Heads Organizational Commitment and Office Performance; the null hypothesis was accepted. The acceptance of the null hypothesis means that there is no meaningful relationship between the organizational commitment of school heads and office performance. This suggests that organizational commitment on the part of school heads has no direct bearing on office performance.

The following were recommended based on the findings of the study:

1. The school head may continue to invest in targeted professional development programs that align with teachers' needs and interests. Offering opportunities for continuous learning can directly impact job satisfaction.
2. School leaders may carry on engaging in ongoing professional development to enhance leadership skills. Programs focused on effective communication, decision-making, and strategic planning can empower school heads.
3. DepEd officials and school heads may keep on with involving teachers in decision-making processes, especially on issues that directly affect their work and the school environment. This fosters a sense of belonging and investment in the school's success.



CORRELATION OF TEACHERS' COMPETENCE IN DEVELOPING AND UTILIZING SUPPLEMENTARY MATERIALS IN EPP: INPUT FOR THE IMPROVED TEACHING PROCESS

Dhalia Ramos Banay

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The study determined the correlation between teachers' competence in developing and utilizing supplementary materials in Edukasyong Pantahanan at Pangkabuhayan (EPP). Specifically, it tried to gauge the level of teachers' competencies in developing supplementary materials in EPP as to curriculum alignment and teachers' competence in using the supplementary materials. Also, it sought to determine the correlation between teacher's competencies in developing and utilizing supplementary materials in E.P.P.

The research method employed for investigating the correlation between teachers' competencies in developing and utilizing supplementary materials in EPP involved descriptive research design. A purposive sampling technique was used in determining the 100 respondents, composed of 50 teachers from the Pila Sub-Office and 50 teachers from the Santa Cruz Sub-Office. Survey-questionnaire validated by the master teachers in the division of Laguna was used.

The findings indicated a high level of competence among teachers in both developing and utilizing supplementary materials for Edukasyong Pantahanan at Pangkabuhayan (EPP). Teachers demonstrated in developing these materials, as well as utilizing them for instruction. Moreover, it was found that there was a significant relationship between the EPP teachers' competencies in developing and utilizing supplementary materials across several dimensions. Despite thorough analysis, it was determined that there is no notable correlation between curriculum alignment, developing differentiation, developing digital competence, and adapting to students needs.

The findings of the study reveal that even though the level of teacher's competencies in developing and utilizing supplementary materials with respect to indicators like curriculum alignment, pedagogical knowledge, and use of assessment, all indicators like content knowledge/expertise, differentiation, digital competence, management of resources, and adaptation to student's needs shows otherwise. Therefore, it is safe to assume that there is no significant correlation between E.P.P. teacher's competencies in developing a utilizing supplementary materials, thus the null hypothesis is accepted.

A proposed framework for developing and utilizing supplementary materials in EPP for an improved teaching process was crafted based on the results. Relatively, future researchers are highly encouraged to incorporate the suggested framework into their research endeavors, focusing on creating and integrating supplementary materials to enrich the instructional techniques employed by EPP educators. Through a comprehensive examination of its impact on the efficacy of teaching and learning methodologies, scholars can offer significant contributions to the realm of education. These contributions will foster a deeper understanding of how instructional practices can be explicitly optimized within the EPP domain, thus paving the way for continuous enhancements in this crucial area of pedagogy.

KEYWORDS: EPP; supplementary materials; teachers' competencies

1. INTRODUCTION

Supplementary resource materials are additional but more functional. The teacher must supplement materials to promote the improved teaching-learning process (Karki, 2018). The Department of Education (DepEd) seeks innovative ways to enhance the teaching-learning process thru learning action cells (LAC). Supplementary materials, including textbooks, worksheets, multimedia resources, and interactive activities, significantly enrich students' learning experiences and improve educational outcomes (Tomlinson, 2011). According to Mondragon et al. (2023), supplementary materials were effective among students. This study focused on the correlation between teachers' competence in developing and utilizing supplementary materials in the subject of Edukasyong Pantahanan at Pangkabuhayan (EPP) and the overall effectiveness of the teaching process.

Edukasyong Pantahanan at Pangkabuhayan (EPP) is a core subject in the Philippines that equips students with practical

knowledge and skills for home management and livelihood. Given its practical nature, the effective integration of supplementary materials can significantly enhance student engagement and learning. Teachers' competence in creating and using these materials is thus pivotal. In this context, competence encompasses the teachers' competence in developing and utilizing the supplementary materials. Developing the said material encompasses variables such as curriculum alignment, pedagogical knowledge, content knowledge, and use of assessment. The material includes differentiation, digital competence, management of resources, and adaptation to students' needs.

Previous studies highlight the positive impact of well-developed supplementary materials on student achievement. Rahimipour (2021) revealed that supplementary materials positively impacted the learners' learning. Similarly, a study by Espino et al. (2020) asserted that supplementary materials can significantly enhance the quality of education by providing



diverse learning resources that cater to different learning styles and needs.

In this study, the researcher aimed to determine the correlation between the teachers' competence in developing and utilizing the supplementary materials of EPP in Pila and Santa Cruz Sub-offices. Focusing on these locales, the study sought to provide localized insights that can inform targeted interventions and professional development programs for EPP teachers.

1.1 Statement of the Problem

Specifically, this study aimed to answer the following sub-problems.

1. What is the level of teachers' competencies in developing supplementary materials in EPP in terms of:
 - 1.1. curriculum alignment,
 - 1.2. pedagogical knowledge,
 - 1.3. content knowledge/expertise, and
 - 1.4. use of assessment?
2. What is the level of teachers' competencies in using the supplementary materials in EPP in terms of:
 - 2.1. differentiation,
 - 2.2. digital competence,
 - 2.3. management of resources, and
 - 2.4. adaptation to students' needs?
3. Is there a significant correlation between the EPP teachers' competencies in developing and utilizing the supplementary materials?
4. What framework for an improved teaching process can be crafted?

2. METHODOLOGY

The research method employed for investigating the correlation between the teachers' competencies in developing and utilizing supplementary materials in Edukasyong Pantahanan at Pangkabuhayan (EPP) towards an improved teaching process involved quantitative research design.

According to Creswell (2018), quantitative methods are instrumental in facilitating the precise measurement and in-depth analysis of numerical data, making them well-suited for evaluating teachers' competencies in developing and employing supplementary materials. Notably, variables such as curriculum

alignment, pedagogical knowledge, digital competence, and responsiveness to students' needs can be effectively quantified using standardized scales or Likert-type items. These tools offer a structured approach that yields objective assessments of educators' proficiencies in these critical areas, fostering a comprehensive understanding of their capabilities and areas for potential growth.

3. RESULTS AND DISCUSSION

This chapter mainly discusses the researcher's problems in the study. The discussion is divided into three (3) parts: the teachers' competencies in developing the supplementary materials, the teachers' competencies in using the supplementary materials, and the relationship between the two variables.

Level of Teachers' Competencies in Developing Supplementary Materials

The level of teachers' competencies in developing supplementary materials in EPP in terms of curriculum alignment, pedagogical knowledge, content knowledge/expertise, and use of assessment was treated statistically using mean and standard deviation.

Level of Teachers' Competencies in Developing Supplementary Materials in Terms of Curriculum Alignment,

which examines the level of teachers' competencies in developing supplementary materials with a focus on curriculum alignment, offers a critical lens into the intersection of instructional design and educational objectives. As such, this table serves as a complete evaluation of teachers' competencies in this essential aspect of educational practice.

Through an analysis of curriculum alignment, educators and educational stakeholders gain valuable insights into the extent to which supplementary materials support and enrich the attainment of Curriculum goals. This sets the stage for a nuanced exploration of teachers' proficiency levels in developing supplementary materials that seamlessly integrate with established curricular frameworks, ultimately enhancing the educational experience for students.

Table 1 Level of Teachers' Competencies in Developing Supplementary Materials in terms of Curriculum Alignment

<i>The Teachers...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
1. ...can align the supplementary materials I develop with the goals and objectives of the EPP curriculum.	4.53	0.50	Strongly Agree
2. ...confident in my ability to ensure that the supplementary materials I create align with the prescribed EPP curriculum content.	4.48	0.50	Strongly Agree
3. My supplementary materials effectively complement the EPP curriculum to enhance students' learning experiences.	4.48	0.54	Strongly Agree
4. I have received adequate training and support to align my supplementary materials with the EPP curriculum.	4.10	0.75	Agree
5. ...regularly update and revise my supplementary materials to maintain alignment with EPP curriculum changes.	4.28	0.67	Strongly Agree



6. ...can modify or adapt my supplementary materials to meet my EPP students' specific needs and learning styles while staying aligned with the curriculum.	4.35	0.52	Strongly Agree
7. ...collaborate with colleagues to ensure that our supplementary materials align with the EPP curriculum, fostering a consistent learning experience.	4.37	0.60	Strongly Agree
8. ...have access to resources and references that help me align my supplementary materials with the EPP curriculum effectively.	4.40	0.49	Strongly Agree
9. ...actively seek feedback from students to assess how well my supplementary materials align with their curriculum expectations and needs.	4.39	0.63	Strongly Agree
10. ...believe that my competency in aligning supplementary materials with the EPP curriculum significantly contributes to student satisfaction and learning outcomes.	4.44	0.59	Strongly Agree
Weighted Mean		4.38	
SD		0.58	
Verbal Interpretation			Very High Competence

Table 1 presents the level of teachers' competencies in developing supplementary materials in terms of curriculum alignment. The overall weighted mean is 4.38 with a standard deviation of 0.58, indicating a verbal interpretation of Very High Competence. This demonstrates a strong consensus among teachers regarding their competencies in aligning supplementary materials with the goals and objectives of the EPP curriculum.

Respondents strongly agreed that they can align the supplementary materials they develop with the goals and objectives of the EPP curriculum, with the highest (M =4.53, SD 0.50). This reflects a high level of confidence among teachers in ensuring that their materials are closely integrated with the prescribed curriculum content, enhancing instructional coherence and effectiveness.

Additionally, respondents strongly agreed that they could modify or adapt their supplementary materials to meet their EPP students' specific needs and learning styles while staying aligned with the curriculum, which received the lowest (M= 4.10, SD= 0.75). Although this was the lowest-rated statement, it still falls within the Agree category, indicating a perceived need for further support and training.

This implies that teachers possess a very high level of competency in developing supplementary materials that align with the EPP curriculum, enhancing the learning experience and contributing to positive student outcomes. However, there may be opportunities for professional development to strengthen further teachers' abilities to adapt materials to meet diverse student needs while maintaining alignment with curriculum standards.

The importance of teachers being skilled in creating supplementary materials, specifically in terms of their pedagogical knowledge, cannot be overstated when delivering impactful classroom lessons. This is highlighted in Table 2, which provides a detailed breakdown of educators' expertise in developing additional resources that enrich student learning and contribute to a more engaging educational environment. Through a comprehensive assessment of pedagogical skills, as reflected in this detailed table, educators gain valuable insights into their ability to create instructional materials that effectively address various learning styles, enhance understanding, and promote critical thinking in their students. Equally important is the need for educators to grasp the proficiency levels highlighted in Table 2, as this information serves as a crucial guide in their teaching strategies and overall classroom approaches.

Table 2 Level of Teachers' Competencies in Developing Supplementary Materials in Terms of Pedagogical Knowledge

STATEMENTS...	MEAN	SD	REMARKS
1. I believe that my competency in pedagogical knowledge significantly contributes to the success of supplementary materials in EPP and positively impacts student learning outcomes.	4.34	0.55	Strongly Agree
2. I actively seek feedback from EPP students to gauge how well my supplementary materials support their learning from a pedagogical perspective.	4.20	0.59	Agree
3. I can assess the effectiveness of my supplementary materials through pedagogical evaluation and adjustments.	4.36	0.59	Strongly Agree
4. I collaborate with other EPP teachers to exchange	4.39	0.65	Strongly Agree



pedagogical insights and best practices for developing supplementary materials.

5. I have the skills to adapt my supplementary materials to address the diverse learning needs of EPP students while maintaining pedagogical soundness.	4.41	0.60	Strongly Agree
6. I believe my pedagogical knowledge enables me to provide clear instructions and guidance within the supplementary materials for EPP.	4.31	0.58	Strongly Agree
7. I regularly integrate innovative teaching strategies into my supplementary materials to promote active learning among EPP students.	4.33	0.60	Strongly Agree
8. I can create supplementary materials that incorporate interactive and engaging activities to enhance EPP students' understanding.	4.33	0.57	Strongly Agree
9. I am confident in my ability to design supplementary materials that cater to various learning styles and preferences of EPP students.	4.32	0.58	Strongly Agree
10. I deeply understand pedagogical principles and theories that inform the development of supplementary materials for EPP.	4.33	0.62	Strongly Agree
Weighted Mean		4.33	
SD		0.59	
Verbal Interpretation			Very High Competence

Table 2 presents the level of teachers' competencies in developing supplementary materials in terms of pedagogical knowledge. The overall weighted mean is 4.33 with a standard deviation of 0.59, indicating a verbal interpretation of Very High Competence. This suggests a strong consensus among teachers regarding their competencies in integrating pedagogical principles into developing supplementary materials for EPP.

Respondents strongly agreed that their competency in pedagogical knowledge significantly contributes to the success of supplementary materials in EPP and positively impacts student learning outcomes, with a (M=4.34, SD= 0.55). This highlights the perceived importance of pedagogical expertise in enhancing the effectiveness of instructional materials and fostering positive learning experiences for students.

Additionally, respondents strongly agreed that they possess the ability to assess the effectiveness of their supplementary materials through pedagogical evaluation and adjustments, with a (M= 4.36, SD= 0.59). This demonstrates a proactive approach among teachers to continuously improve their instructional practices based on pedagogical insights and student feedback. Furthermore, respondents strongly agreed that they have the

skills to adapt their supplementary materials to address the diverse learning needs of EPP students while maintaining pedagogical soundness (M = 4.41, SD 0.60). This indicates a high confidence level among teachers in their ability to tailor instructional materials to accommodate various learning styles and preferences.

Overall, the findings imply that teachers possess a very high level of competencies in integrating pedagogical knowledge into developing supplementary materials for EPP. This highlights the importance of pedagogical expertise in creating practical instructional resources that promote active learning, engagement, and understanding among students.

In Table 3, you will find a comprehensive overview detailing the proficiency levels of teachers' competencies, specifically in creating supplementary materials with a strong emphasis on content knowledge. This evaluation plays a critical role in shedding light on how well educators can strategically deliver additional resources, which in turn play a pivotal role in bolstering students' understanding and mastery of the subject material, ultimately elevating the overall learning experience and academic achievement.



Table 3 Level of Teachers' Competencies in Developing Supplementary Materials in Terms of Content Knowledge/Expertise

STATEMENTS...	MEAN	SD	REMARKS
1. I engage in professional development opportunities to further enhance my content knowledge for EPP.	4.56	0.59	Strongly Agree
2. I am skilled at adapting supplementary materials to accommodate the specific content requirements of different EPP grade levels.	4.30	0.64	Strongly Agree
3. I collaborate with fellow EPP teachers to share content knowledge and ensure consistency in supplementary materials.	4.37	0.61	Strongly Agree
4. I regularly update my content knowledge to stay current with changes in the EPP curriculum and subject matter.	4.34	0.61	Strongly Agree
5. I can incorporate real-world examples and applications into supplementary materials, making EPP content more relatable to students.	4.43	0.54	Strongly Agree
6. My content knowledge enables me to identify key concepts and learning outcomes that should be emphasized in supplementary materials for EPP.	4.30	0.58	Strongly Agree
7. I can create supplementary materials that align seamlessly with EPP subject matter, ensuring accuracy and relevance.	4.44	0.61	Strongly Agree
8. I am confident in my knowledge of EPP curriculum goals and objectives, allowing me to align supplementary materials effectively.	4.39	0.65	Strongly Agree
9. I have a strong understanding of the content areas relevant to EPP, which informs the development of supplementary materials.	4.38	0.63	Strongly Agree
10. I believe that my content knowledge plays a vital role in the quality of supplementary materials for EPP and positively impacts student learning outcomes.	4.45	0.63	Strongly Agree
Weighted Mean		4.40	
SD		0.61	
Verbal Interpretation			Very High Competence

Table 3 presents the level of teachers' competencies in developing supplementary materials in terms of content knowledge/expertise. The overall weighted mean is 4.40 with standard deviation of 0.61 indicating a verbal interpretation of Very High Competence. This indicates a strong consensus among teachers regarding their competencies in integrating content knowledge and expertise into the development of supplementary materials for EPP.

Respondents strongly agreed that they engage in professional development opportunities to further enhance their content knowledge for EPP, with the highest (M= 4.56, SD= 0.59). This highlights the commitment of teachers to continuously improve their understanding of subject matter, ensuring the accuracy and relevance of instructional materials.

Additionally, respondents strongly agreed that they possess the ability to incorporate real-world examples and applications into supplementary materials, making EPP content more relatable to students, with (M=4.43, SD =0.54). This demonstrates a proactive approach among teachers in creating engaging and relevant instructional resources that resonate with students' experiences and interests.

Furthermore, respondents strongly agreed that they have a strong understanding of the content areas relevant to EPP, which informs the development of supplementary materials, with (M=4.38, SD= 0.63). This indicates a high level of confidence among teachers in their ability to identify key concepts and learning outcomes that should be emphasized in instructional materials.

Overall, the findings imply that teachers possess a very high level of competencies in integrating content knowledge and expertise into the development of supplementary materials for EPP. This emphasizes the importance of teachers' subject matter expertise in creating effective instructional resources that support student learning and achievement.

Research on teachers' competency in developing supplementary materials based on content knowledge and expertise reveals a generally high level of capability. It is important to note that these findings are in line with the remarkable "Very High" level of competency demonstrated by teachers in terms of creating supplementary materials grounded in their content knowledge and expertise. This was supported by the study's calculated weighted mean score, emphasizing the teachers' ability to leverage their expertise for enriching pedagogical practices.



Table 4 Level of Teachers’ Competencies in Developing Supplementary Materials in Terms of Use of Assessment

STATEMENTS...	MEAN	SD	REMARKS
1. I am open to enhancing my skills in integrating assessment into supplementary materials for EPP.	4.64	0.48	Strongly Agree
2. I encourage students to use supplementary materials for self-assessment and improvement in EPP.	4.51	0.50	Strongly Agree
3. I collaborate with other EPP teachers to share effective strategies for integrating assessment into materials.	4.50	0.52	Strongly Agree
4. I believe that integrating assessment into supplementary materials enhances student understanding and performance.	4.59	0.55	Strongly Agree
5. I provide opportunities for students to self-assess and peer-assess their work through supplementary materials.	4.51	0.52	Strongly Agree
6. I regularly review and update supplementary materials to ensure they reflect changes in assessment criteria.	4.35	0.59	Strongly Agree
7. I align supplementary materials with the learning objectives and outcomes of EPP assessments.	4.34	0.52	Strongly Agree
8. Supplementary materials I develop include clear guidelines for assessing student learning and progress.	4.38	0.53	Strongly Agree
9. I consider a variety of assessment methods, such as quizzes, projects, and peer evaluations, when creating supplementary materials.	4.48	0.52	Strongly Agree
10. I effectively integrate assessment tools and strategies into the supplementary materials I develop for EPP.	4.38	0.55	Strongly Agree
Weighted Mean		4.47	
SD		0.53	
Verbal Interpretation			<i>Very High Competence</i>

Table 4 presents the level of teachers’ competencies in developing supplementary materials in terms of the use of assessment. The overall mean is 4.47 with a standard deviation of 0.53, indicating a verbal interpretation of Very High Competence. This proposes a strong consensus among teachers regarding their competencies in integrating assessment into the development of supplementary materials for EPP.

Respondents strongly agreed that they are open to enhancing their skills in integrating assessment into supplementary materials for EPP, with the (M =4.64, SD=0.48). This reflects a proactive attitude among teachers to continuously improve their abilities and incorporate assessment strategies that enhance student learning and performance.

Additionally, respondents strongly agreed that integrating assessment into supplementary materials enhances student understanding and performance (M=4.59, SD= 0.55). This highlights the perceived importance of assessment in reinforcing key concepts and promoting academic growth among students.

Furthermore, respondents strongly agreed that they encourage students to use supplementary materials for self-assessment and improvement in EPP, with a (M=4.51, SD= 0.50). This validates a commitment among teachers to empower students to take ownership of their learning and monitor their progress through self-assessment practices.

Overall, the findings imply that teachers possess a very high level of competencies in integrating assessment into developing supplementary materials for EPP. This highlights the importance of incorporating assessment strategies that promote student engagement, understanding, and academic growth within instructional resources.

Level of Teachers’ Competencies in Using the Supplementary Materials

The statistical analysis of teachers’ competencies in utilizing supplementary materials for English for Professional Purposes (EPP) focused on various aspects like differentiation, digital competence, resource management, and adjusting to students’ needs. This examination was conducted through the calculation of mean and standard deviation, providing insight into the effectiveness and proficiency of teachers in these critical areas of instruction.

Table 5 comprehensively analyzes teachers’ competencies in effectively utilizing supplementary materials to enhance learning outcomes. The evaluation primarily centers on their adeptness in customizing these resources to cater to a varied student population’s specific learning styles and requirements, thus showcasing the educators’ proficiency in fostering an inclusive and engaging learning environment.

Through this assessment, we gain insight into how effectively teachers utilize supplementary materials to provide personalized support and promote academic growth among their students.



Table 5 Level of Teachers' Competencies in Using the Supplementary Materials in Terms of Learning Differentiation
STATEMENTS...

STATEMENTS...	MEAN	SD	REMARKS
1. I believe that my ability to differentiate instruction using supplementary materials positively influences EPP student engagement and learning outcomes.	4.45	0.54	Strongly Agree
2. I encourage self-directed learning among EPP students by providing them with supplementary materials that allow for independent exploration.	4.41	0.53	Strongly Agree
3. I regularly assess the effectiveness of supplementary materials in meeting the individual needs of EPP students and make adjustments as necessary.	4.31	0.56	Strongly Agree
4. I incorporate a variety of supplementary materials to address different learning preferences among EPP students, such as visual aids, hands-on activities, and digital resources.	4.39	0.55	Strongly Agree
5. I adjust the pace of instruction with the help of supplementary materials to ensure that EPP students understand and master the content.	4.48	0.50	Strongly Agree
6. I use supplementary materials to facilitate group activities and peer collaboration among EPP students.	4.43	0.59	Strongly Agree
7. I challenge high-achieving EPP students by providing advanced supplementary materials to extend their learning.	4.31	0.53	Strongly Agree
8. I differentiate instruction using supplementary materials to provide additional support for struggling EPP students.	4.43	0.61	Strongly Agree
9. I tailor my use of supplementary materials to accommodate students with varying abilities and learning styles in EPP.	4.41	0.51	Strongly Agree
10. I can effectively adapt supplementary materials to meet the diverse learning needs of EPP students.	4.38	0.53	Strongly Agree
Weighted Mean		4.40	
SD		0.55	
Verbal Interpretation			<i>Very High Competence</i>

Table 5 presents the level of teachers' competencies in using supplementary materials in terms of learning differentiation. The overall weighted mean is 4.40 with a standard deviation of 0.55, indicating a verbal interpretation of Very High Competence. This suggests a strong consensus among teachers regarding their competencies in utilizing supplementary materials to cater to the diverse learning needs of EPP students.

Respondents strongly agreed that their ability to differentiate instruction using supplementary materials positively influences EPP student engagement and learning outcomes, with the highest (M= 4.45, SD=0.54). This highlights the perceived importance of differentiation in enhancing student engagement and promoting academic success among learners with varying abilities and learning styles.

Additionally, respondents strongly agreed that they tailor supplementary materials to accommodate students with varying abilities and learning styles in EPP, with a (M= 4.41, SD= 0.51). This demonstrates a commitment among teachers to individualize instruction and provide personalized learning

experiences that meet the unique needs of each student.

Moreover, it is apparent from the survey responses that educators show a consensus in their efforts to tailor the pace of teaching to the needs of EPP students by incorporating additional resources. The mean score of 4.48 with a standard deviation of 0.50 indicates a high level of agreement among teachers regarding the flexible nature of adapting supplementary materials to enhance students' grasp and mastery of academic subjects. This exemplifies a commitment to customizing instructional strategies to effectively meet EPP students' diverse learning requirements.

Overall, the findings imply that teachers possess a very high level of competencies in using supplementary materials to differentiate instruction and address the diverse learning needs of EPP students. This highlights the importance of providing inclusive and personalized learning experiences that foster academic growth and success for all learners.



Table 6 Level of Teachers' Competencies in Using the Supplementary Materials in Terms of Digital Competence			
STATEMENTS...	MEAN	SD	REMARKS
1. My digital competence positively impacts EPP students' satisfaction and learning outcomes.	4.36	0.56	Strongly Agree
2. I use digital supplementary materials to adapt to the evolving needs of EPP students in a technologically driven world.	4.37	0.54	Strongly Agree
3. I provide guidance and support to EPP students on how to use digital materials effectively for learning.	4.34	0.55	Strongly Agree
4. I am open to exploring new digital tools and platforms to diversify the supplementary materials I use in EPP.	4.36	0.56	Strongly Agree
5. I believe that digital supplementary materials improve EPP students' understanding of the content.	4.37	0.56	Strongly Agree
6. I encourage EPP students to use digital resources for independent learning and research.	4.35	0.52	Strongly Agree
7. I can troubleshoot common technical issues when using digital materials in EPP classes.	4.15	0.59	Agree
8. I integrate digital supplementary materials effectively to enhance EPP lessons and engage students.	4.32	0.58	Strongly Agree
9. I am proficient in finding and selecting digital supplementary materials that align with EPP curriculum goals.	4.22	0.58	Strongly Agree
10. I feel confident in using digital tools and resources to supplement EPP instruction.	4.36	0.63	Strongly Agree
Weighted Mean		4.32	
SD		0.57	
Verbal Interpretation		<i>Very High Competence</i>	

Table 6 presents the level of teachers' competencies in terms of digital competence when using supplementary materials. The overall weighted mean is 4.32 with a standard deviation of 0.57, indicating a verbal interpretation of Very High Competence. This suggests a strong consensus among teachers regarding their competencies in utilizing digital tools and resources to enhance instruction and engage EPP students in a technologically driven learning environment.

Respondents strongly agreed that their digital competence positively impacts EPP students' satisfaction and learning outcomes, with the highest (M= 4.36, SD= 0.56). This highlights the perceived importance of digital proficiency in fostering student success and enhancing the educational experience through technology integration.

Additionally, respondents strongly agreed that they use digital supplementary materials to adapt to the evolving needs of EPP students in a technologically driven world, (M=4.37, SD= 0.54). This demonstrates a proactive approach among teachers in leveraging digital resources to meet students' diverse learning preferences and technological skills.

Furthermore, respondents strongly agreed that they provide guidance and support to EPP students on using digital materials effectively for learning, with a (M= 4.34, SD= 0.55). This reflects a commitment among teachers to empower students with digital literacy skills necessary for academic success and lifelong learning.

Overall, the research suggests that teachers demonstrate a remarkable proficiency in utilizing digital supplementary materials for EPP instruction and fostering active student involvement in meaningful learning encounters. This underscores the significance of digital competence in equipping students with the necessary skills and knowledge to thrive in an ever-changing digital landscape, thereby paving the way for their future success.

Table 7 outlines an evaluation of the level of teachers' competencies concerning the utilization of supplementary materials, explicitly addressing the management of resources. This examination assessed educators' proficiency in efficiently organizing and utilizing supplementary materials to support their teaching objectives.



By examining the teaching staff's abilities within this context, the table offers valuable perspectives on how they harness available resources to improve the quality of instructional methods and make learning more conducive for students. Such

analysis sheds light on how effectively educators leverage resources to enrich the educational experience for their students.

Table 7 Level of Teachers' Competencies in using the Supplementary Materials in Terms of Management of Resources

<i>STATEMENTS...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
<i>1. I am open to improving my resource management skills to better support EPP students' learning.</i>	4.63	0.51	Strongly Agree
<i>2. I believe that proper resource management positively impacts the effectiveness of EPP teaching.</i>	4.58	0.50	Strongly Agree
<i>3. I involve my EPP students in managing and organizing supplementary materials for a more interactive learning experience.</i>	4.44	0.54	Strongly Agree
<i>4. I collaborate with other EPP teachers to effectively share and manage supplementary materials.</i>	4.45	0.50	Strongly Agree
<i>5. I efficiently allocate resources to match the different EPP topics and subjects.</i>	4.41	0.55	Strongly Agree
<i>6. I keep track of the availability and condition of supplementary materials to ensure they are up to date.</i>	4.44	0.59	Strongly Agree
<i>7. I actively seek new, diverse supplementary materials to enrich EPP lessons.</i>	4.49	0.52	Strongly Agree
<i>8. I can adapt and modify supplementary materials to meet the specific needs of my EPP students.</i>	4.53	0.52	Strongly Agree
<i>9. I have a systematic approach to selecting, storing, and accessing supplementary materials for EPP.</i>	4.39	0.53	Strongly Agree
<i>10. I effectively organize and manage supplementary materials for EPP lessons.</i>	4.42	0.52	Strongly Agree
Weighted Mean		4.48	
SD		0.53	
Verbal Interpretation			<i>Very High Competence</i>

Table 7 illustrates the level of teachers' competencies in using supplementary materials in terms of the management of resources. The overall weighted mean is 4.48 with a standard deviation of 0.53, indicating a verbal interpretation of "Very High Competence." This suggests a strong consensus among teachers regarding their competencies in effectively managing resources to support EPP students' learning.

Respondents strongly agreed that they are open to improving their resource management skills to better support EPP students' learning, with the highest (M=4.63, SD= 0.51). This highlights a proactive attitude among teachers in continuously enhancing their abilities to allocate and utilize resources effectively to meet students' educational needs.

Additionally, respondents strongly agreed that they believe proper resource management positively impacts the effectiveness of EPP teaching, with an (M= 4.58 SD=0.50).

This highlights the perceived importance of resource management in creating an optimal learning environment that facilitates student engagement and academic achievement.

Furthermore, respondents strongly agreed that they involve their EPP students in managing and organizing supplementary materials for a more interactive learning experience (M=4.44, SD=0.54). This demonstrates a collaborative approach among teachers and students to promote ownership and responsibility for learning resources.

The research outcomes suggest teachers' proficiency in effectively handling resources to facilitate EPP instruction. This highlights the critical role of strategic resource management and organization in establishing an enriching educational setting that nurtures students' achievements and scholastic development, ultimately contributing to their academic advancement and overall success.



In sum, the literature demonstrates a spectrum of practices and challenges in teachers' management of supplementary materials, ranging from effective utilization and technology integration to potential gaps in accessing high-quality resources and addressing technical hurdles. These findings highlight the

need for continuous professional development and collaboration among educators and educational stakeholders to optimize resource management and enhance teaching and learning outcomes.

Table 8 Level of Teachers' Competencies in Using the Supplementary Materials in terms of Adaptation to Students' Needs

<i>STATEMENTS...</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
1. I am open to improving my skills in adapting supplementary materials to meet students' needs better.	4.70	0.46	Strongly Agree
2. I involve students in selecting and adapting materials to empower their learning.	4.48	0.55	Strongly Agree
3. I collaborate with other EPP teachers to share strategies for adapting materials to students' needs.	4.44	0.60	Strongly Agree
4. I believe that adapting supplementary materials enhances student comprehension and participation.	4.52	0.55	Strongly Agree
5. I encourage my EPP students to provide feedback on supplementary materials and adapt them accordingly.	4.48	0.50	Strongly Agree
6. I ensure that supplementary materials align with my EPP students' individual interests and preferences.	4.46	0.54	Strongly Agree
7. I can differentiate supplementary materials to challenge and engage high-achieving EPP students.	4.40	0.60	Strongly Agree
8. I modify supplementary materials to support struggling EPP students.	4.48	0.60	Strongly Agree
9. I regularly assess my students' learning styles and abilities to tailor supplementary materials accordingly.	4.46	0.54	Strongly Agree
10. I effectively adapt supplementary materials to suit the diverse needs of my EPP students.	4.42	0.54	Strongly Agree
Weighted Mean		4.48	
SD		0.55	
Verbal Interpretation			<i>Very High Competence</i>

Table 8 depicts the level of teachers' competencies in using supplementary materials in terms of adaptation to students' needs. The overall weighted mean is 4.48, with a standard deviation of 0.55, indicating a verbal interpretation of Very High Competence. This suggests a strong consensus among teachers regarding their competencies in adapting instructional materials to meet the diverse needs of EPP students.

Respondents strongly agreed that they are open to improving their skills in adapting supplementary materials to better meet students' needs, with the highest (M= 4.70, SD= 0.46). This highlights a proactive approach among teachers to continuously enhance their abilities to tailor instructional resources to address the individualized learning requirements of students.

Additionally, respondents strongly agreed that they involve students in selecting and adapting materials to empower their learning, with an (M=4.48 and SD= 0.55). This demonstrates a collaborative approach between teachers and students in fostering ownership and agency over their learning experiences.

Furthermore, respondents strongly agreed that they believe adapting supplementary materials enhances student comprehension and participation, with a (M= 4.52 and SD= 0.55). This highlights the perceived importance of instructional adaptation in promoting student engagement and

understanding.

Overall, the findings imply that teachers possess a very high level of competencies in adapting supplementary materials to meet the diverse needs of EPP students. This highlights the importance of personalized instruction in creating inclusive learning environments that cater to each learner's unique strengths, interests, and preferences.

Blažević et al. (2022) and Harper (2019) contribute to the discourse on the significance of teachers' adaptation to students' needs when integrating supplementary materials into their teaching practices. Blažević's investigation into mathematics education in Croatia underscores teachers' commitment to addressing diverse student abilities and adjusting teaching methods during supplementary classes. Similarly, Harper's examination of an English as a Foreign Language course in China highlights the provision of a wide array of supplementary materials by the instructor to accommodate varying learner needs. However, Harper also identifies discrepancies between the instructor's objectives and the students' interpretations of the materials, underscoring the necessity for clearer communication channels.



Test of Significant Relationship between the EPP Teachers' Competencies in Developing and Utilizing the Supplementary Materials

The significant relationship between the EPP teachers' competencies in developing and utilizing the supplementary

materials in terms of differentiation, digital competence, management of resources, and adaptation to students' needs was treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

Table 9 Significant Relationship between the EPP Teachers' Competencies in Developing and Utilizing the Supplementary Materials

Developing (IV)	Using (DV)			
	Differentiation	Digital Competence	Management of Resources	Adaptation to Students' Needs
CURRICULUM ALIGNMENT	0.49**	-0.03	0.61**	0.04
Significance(2-Tailed)	<.001	.749	<.001	.717
N	100	100	100	100
PEDAGOGICAL KNOWLEDGE	-0.10	-0.06	-0.12	0.45**
Significance(2-Tailed)	.324	.345	.263	<.001
N	100	100	100	100
CONTENT KNOWLEDGE	0.56**	-0.12	0.62**	0.16
Significance(2-Tailed)	<.001	.245	<.001	.115
N	100	100	100	100
ASSESSMENT INTEGRATION	0.12	0.50**	0.15	0.58**
Significance(2-Tailed)	.252	<.001	.132	<.001
N	100	100	100	100

P < 0.05 = significant

Table 9 shows the correlation between a teacher's competency in developing a specific aspect of supplementary materials (developing) and their competency in using that same aspect effectively (using). Statistical significance (p-value) is included to indicate how likely the observed correlation is due to chance rather than a genuine relationship.

For variables with Significant Correlations (p-value < .05):

A correlation coefficient of 0.49 (positive) and a p-value of <.001 (significant) suggests a strong positive relationship. This means teachers with higher competency in developing materials aligned with curriculum objectives (developing) tend to also have higher competency in using those aligned materials effectively within their teaching (using). In other words, strong development skills in curriculum alignment seem to translate into effective use.

A correlation coefficient of 0.56 (positive) and a p-value of <.001 (significant) suggests another strong positive relationship. This means teachers with a strong understanding of EPP subject matter when developing materials (developing) tend also to demonstrate effective use of that knowledge when utilizing the materials (using).

A correlation coefficient of 0.45 (positive) and a p-value of <.001 (significant) suggests a positive relationship between a

teacher's competency in using materials that integrate diverse teaching methods (using) and their competency in developing those methods (developing). However, the threshold for statistical significance is generally set at p < .05, so a p-value of <.001 is a powerful result. This suggests that teachers who are skilled at using these methods when implementing the materials were also likely skilled at integrating those methods during development, though the causal direction is unclear from this analysis alone.

A correlation coefficient of 0.50 (positive) and a p-value of <.001 (significant) suggests a strong positive relationship. This means teachers who can effectively integrate assessment strategies while using the materials (using) were also likely skilled at integrating assessment into the development of those materials (developing).

For No Significant Correlations (p-value > .05):

Correlation coefficients are close to zero (weak), and p-values are high (> .05), indicating no statistically significant relationship between a teacher's competency in developing materials that cater to diverse student needs (differentiation) or using digital resources (digital competence) and their competency in using those aspects of the materials.

Similarly, correlation coefficients are close to zero and p-values are high for these areas, indicating no statistically significant relationships between the developing and utilizing competencies.

These non-significant correlations, while not conclusive in indicating the absence of relationships, rather reflect the higher probability of any observed links occurring by chance. This situation implies the importance of conducting more in-depth investigations in these areas or recognizing that mastering these competencies could differ significantly from successfully utilizing them within the classroom setting.

This implies that educational stakeholders need to prioritize targeted professional development initiatives aimed at enhancing teachers' competencies in developing and utilizing

supplementary materials, particularly in areas such as curriculum alignment, content knowledge, digital competence, and adaptation to students' needs.

What framework for improved teaching process can be crafted in EPP?

Based on the high level of teachers' competencies in developing and utilizing supplementary materials, particularly in terms of curriculum alignment, pedagogical knowledge, content expertise, assessment use, learning differentiation, digital competence, resource management, and adaptation to student needs, a comprehensive framework can be recommended to further enhance teaching practices in Edukasyon Pantahanan at Pangkabuhayan (EPP).

Here is a suggested framework based on the findings:

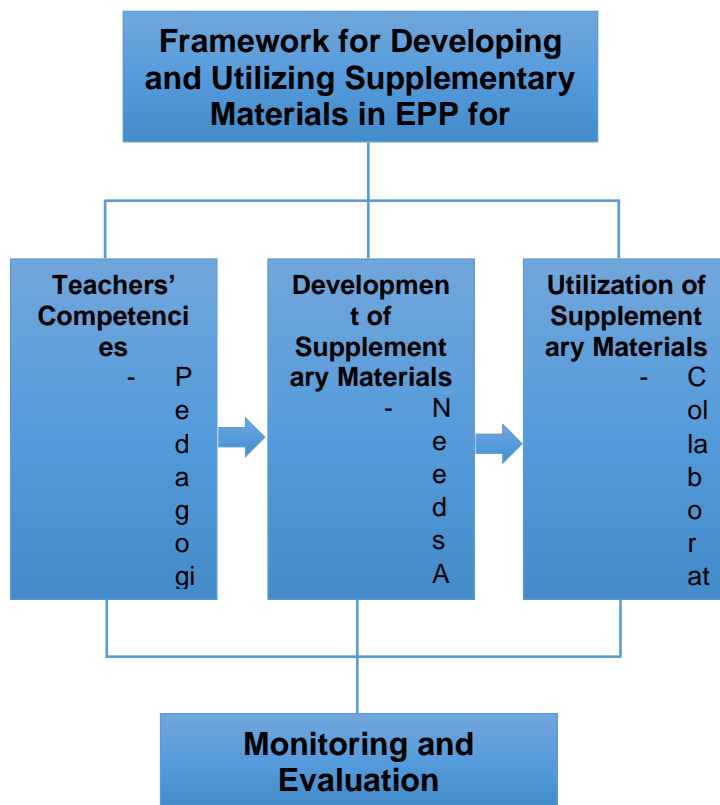


Figure 3. Framework for Developing and Utilizing Supplementary Materials in EPP for the Improved Teaching Process

This diagram visually represents the framework components and their interconnectedness in supporting the effective development and use of supplementary materials in EPP teaching. Each component enhances teaching and learning experiences, benefiting students' academic achievement and holistic development.

The teachers' competencies include Pedagogical Knowledge, Content Expertise, Digital Competence, and Resource Management Skills.

Pedagogical knowledge, the teachers should employ effective pedagogical strategies and instructional techniques when designing supplementary materials. This may include using

inquiry-based learning, cooperative learning activities, or hands-on experiences to engage students and promote deeper understanding.

For example, *Implement project-based learning activities where students research and design a sustainable household budget as part of the EPP curriculum. Provide guidance and support to facilitate student inquiry, critical thinking, and problem-solving skills.*

Content expertise/knowledge is essential for teachers to demonstrate expertise in the subject matter when developing supplementary materials. This involves providing accurate and comprehensive resources that address key concepts and skills



covered in the EPP curriculum.

For example, create a series of instructional videos explaining fundamental concepts in entrepreneurship and business management and *key topics in the EPP curriculum. Ensure that the content is accurate, clear, and accessible to students.*

Digital Competence, leveraging digital resources and technology, can enhance the development and delivery of supplementary materials. This includes using educational apps, online simulations, multimedia presentations, or interactive platforms to engage students and facilitate active learning experiences.

For example, Integrate a virtual simulation game that simulates real-world household management and budgeting scenarios into the EPP curriculum. Guide students in navigating the game and reflecting on their decisions to promote financial literacy skills.

Lastly, the teacher's resource management skills, as well as efficient allocation and management of resources, are essential for the effective implementation of supplementary materials. This includes organizing materials, managing time effectively, and utilizing technology tools to streamline workflows and enhance productivity.

Developing supplementary materials requires needs assessment, curriculum alignment, assessment integration, and learning differentiation.

Needs Assessment. Before creating supplementary materials, assessing students' needs, learning styles, and proficiency levels is crucial. This could involve surveys, diagnostic assessments, or informal observations to identify areas where additional support or enrichment is required.

For example, *a pre-assessment survey can be conducted to determine students' prior knowledge and interests in a specific topic within the EPP curriculum. Use the results to tailor supplementary materials to address areas where students need additional support or enrichment.*

Curriculum Alignment. Supplementary materials should align closely with the goals, objectives, and content of the EPP curriculum. This ensures that the materials reinforce what students are learning in class and contribute to instruction's overall coherence and effectiveness.

For example, *Develop a set of supplementary worksheets that directly align with the learning objectives outlined in the EPP curriculum. Ensure that the activities and exercises reinforce the concepts and skills covered in class.*

Assessment Integration. Supplementary materials should incorporate assessment tools and strategies to evaluate student learning outcomes. This could include formative assessments, quizzes, project-based assessments, or self-assessment activities to monitor progress and provide student feedback.

For example, *a digital quiz can be designed using an online*

platform to assess students' understanding of financial literacy concepts taught in the EPP curriculum. Provide immediate feedback and explanations for incorrect answers to support student learning.

They are learning Differentiation. Teachers should tailor supplementary materials to meet students' diverse needs and preferences. This involves providing multiple entry points, scaffolding support, and extension activities to accommodate varying learning styles, abilities, and interests.

For example, *Offer a menu of project options for a culminating activity in the EPP curriculum, allowing students to choose tasks that align with their interests and learning preferences. Provide scaffolding support and extension activities to accommodate diverse needs.*

The effective utilization of supplementary materials not only involves adapting to individual students' diverse learning needs but also encourages collaborative practices among educators and fosters active student participation in the learning process.

To effectively meet students' needs, it is crucial to consistently evaluate and modify supplementary materials in response to feedback, performance data, and changing educational requirements. This ongoing assessment and adjustment process guarantees that the materials stay current, interesting, and beneficial for enhancing student learning outcomes.

For example, *feedback from students regarding the effectiveness and relevance of the supplementary materials incorporated in the EPP classroom should be collected. This feedback will serve as valuable insight to further enhance and modify the materials to align more closely with the students' specific learning requirements and preferences, thus fostering a more conducive and engaging learning environment that supports their educational journey effectively.*

Collaborative Practices. Collaborative practices involving students empower them to take an active role in their education by creating, evaluating, and utilizing supplementary materials. Teachers foster a sense of ownership, responsibility, and agency by engaging students in collaborative processes, leading to enhanced learning outcomes and student satisfaction.

For example, *Students take on the role of facilitators by organizing and leading workshops or tutorials on specific topics within the EPP curriculum. Through these student-led sessions, classmates can learn from their peers, deepen their understanding, and explore different perspectives.*

Students' Involvement. Encouraging student participation in choosing, modifying, and assessing additional resources increases their sense of ownership in the learning process and fosters a greater degree of independence and responsibility for their education. Ultimately, this approach cultivates a more profound connection with the subject matter and facilitates a more engaging and meaningful educational experience.

For example, *Engage students actively in co-creating rubrics and assessment criteria for project-based assignments within*



the EPP curriculum. Foster a culture where students feel empowered to offer their insights on the selection of supplementary materials and resources that they perceive as both stimulating and beneficial for their learning journey.

Lastly, this shall be monitored and evaluated to determine the effectiveness of the developed and utilized supplementary materials in EPP.

Monitoring and Evaluation play a crucial role in the educational setting. It is indispensable to regularly monitor and evaluate supplementary materials to gauge their influence on student learning outcomes. This comprehensive process entails collecting pertinent data, actively seeking feedback from students and colleagues, and promptly implementing necessary adjustments to enhance overall effectiveness and ensure impactful learning experiences for all individuals involved in the academic journey.

Administering formative assessments at various points within the EPP curriculum allows for ongoing student progress and comprehension monitoring. Moreover, these assessments play a pivotal role in determining the effectiveness of the supplementary materials. By carefully analyzing the assessment data and student work samples collected, educators can gain valuable insights into students' areas of strength as well as pinpoint specific areas that may require improvement. This thorough analysis helps in making informed decisions on how best to tailor instructional strategies and adapt teaching methods to meet better the diverse learning needs of students across the curriculum.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings revealed, the conclusion was drawn: Although there are some indicators in developing and utilizing supplementary materials for E.P.P. shows very high competence across various indicators, overall result show no significant relationship is found between using curriculum alignment, developing differentiation, developing digital competence, and adapting to students' needs. Hence, accepting the null hypothesis becomes a plausible outcome considering these complexities. This highlights the diverse nature of teacher competencies and the unique considerations required for each skill set in developing and utilizing supplementary materials in E.P.P. The absence of a significant relationship in these areas suggests further investigation and potential intervention to bridge gaps or discrepancies. It underscores the complexity of teachers' roles and the multifaceted nature of their responsibilities in meeting the diverse needs of students. By acknowledging these nuances and tailoring support accordingly, educators can strive for continuous improvement and better cater to the evolving demands of the educational landscape.

Based on the findings and conclusions of the study, the following recommendations are hereby given:

1. To improve the development of supplementary materials for EPP, coordinators may establish a collaborative

platform, organize professional development sessions, and encourage cross-departmental collaboration to enrich resources and enhance effectiveness in classrooms.

2. School Heads and Master Teachers play a crucial role in recognizing and encouraging the effective utilization of supplementary materials within EPP classes. To foster this, they can introduce peer observation and feedback mechanisms. By sharing successful strategies and setting aside resources for collaborative training sessions, educators can enhance their teaching practices and ultimately benefit their students.
3. Future researchers are encouraged to employ the proposed framework for developing and utilizing supplementary materials to enhance the teaching process among EPP teachers. By assessing its effectiveness in improving teaching and learning processes, researchers can contribute valuable insights to the field of education and inform further advancements in instructional practices within the EPP subject area.

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TEACHER'S CAREER FULFILLMENT: ITS RELATION TO PROFESSIONAL SKILLS AND JOB PERFORMANCE

Jean Paul Villanueva Banay

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study aimed to determine the relation between teacher's career fulfillment and his professional skills and job performance. Specifically, this study sought to answer the following: The demographic profile of the teachers; the level of teacher's career fulfillment; the teacher's professional skills; and job performance. Also, it identified the significant relationship between demographic profile on teacher's professional skills and job performance as well as the significant relationship between teacher's career fulfillment on teacher's professional skills and job performance.

The study was conducted to prove that there was a significant difference between the following variables. The respondents of the study were composed of one hundred (100) elementary teachers at Pila Sub-Office to determine the significant relation between teacher's demographic profile and career fulfillment to their professional skill and job performance. In this study, purposive random sampling method was used in choosing the respondents. The researcher used a self-made questionnaire validated by different experts from Pila Sub-Office and distributed within Pila Sub-Office.

The findings of the study from the demographic profile of elementary teachers in Pila Sub-Office reveal interesting insights on the characteristics and diversity of respondents such as: in terms of age, it was observed that majority of the respondents fall within the middle-aged bracket; as to sex, the composition of respondents is predominantly female; for length of service, most of them are more than 10 years in service; and for position, generally are proficient teachers. The study's findings shows that teacher career fulfillment reflecting aspects such as salary, working conditions, workload, benefits, recognition, and support systems. These elements collectively contribute to the overall interpretation of a teacher feeling "Fulfilled" in their professional role.

Analysis of data regarding teachers' perceptions of their professional skills, which include organizational, human relations, communication, and leadership skills, reveals that educators at Pila Sub-Office are categorized as being "highly skilled" in these areas. In terms of the teachers' job performance, it is worth noting their IPCRF rating which reflects a mean value suggesting that their performance can be characterized as "Very Satisfactory" illustrates a high level of performance.

Teacher's professional skill and job performance are not significantly related to their demographic profile, suggesting that personal demographics do not determine teaching effectiveness. Based on the correlation analysis done on these variables, there is no substantial association between a teacher's professional skill and job performance and their level of career satisfaction. This suggests that these elements may affect teachers' overall sense of fulfillment, better performance is not a direct result of them.

Based on the findings and conclusions in the study the author suggest that future researchers may continue to study teacher's career fulfillment on different levels and may include additional factors that affects the work environment. Officials and administrators of the Department of Education may use the data collected in this study as basis for future study and formulation of new policies aimed at enhancing teacher fulfillment and professional growth.

KEYWORDS: teacher's career fulfillment; professional skills; job performance

1. INTRODUCTION

Teachers are the backbone of any educational system, and their career fulfillment is essential for the success of any type of school. It is very important to recognize how teachers see themselves in their chosen career grow personally and professionally. It is relevant to identify if it is related to their professional skills and job performance.

A teacher's career fulfillment and professional skills can be seen in the way they interact with students, colleagues, and administrators. A fulfilled teacher will be more likely to have better communication skills, be more organized, and have a better understanding of classroom management thus leading to better performance. Finding a career that is fulfilling can be elusive – yet not impossible to find (Castrillon, 2019).

Organizations have to be strong and resilient to survive against developing technology, changes and increasing competition. Accordingly, these processes faced by organizations directly affect employees (Karaman et al., 2020).

Career fulfillment is the satisfaction, purpose, and happiness that an individual experiences in their work. It is the feeling of being engaged and motivated to do one's work. Where one's skills and talents are put to good use. Career fulfillment goes beyond financial success. One may be financially successful but not fulfilled in their career. Factors like personal growth, work-life balance, a harmonious relationship within the group, and a sense of accomplishment are some of the factors that affect one's career fulfillment.

The primary objective of the researcher is to thoroughly examine the relationship between a teacher's level of career fulfillment within the educational field and its direct relationship on their overall professional capabilities and job proficiency specifically within the setting of Pila Sub-Office.

1.1 Statement of the Problem

Specifically, this study is guided by the following questions:

1. What is the demographic profile of the teachers as to:
 - 1.1 Age;
 - 1.2 Sex;
 - 1.3 Length of service; and
 - 1.4 Position?
2. What is the level of teacher's career fulfillment with regards to the following:
 - 2.1 Salary;
 - 2.2 Working Condition;
 - 2.3 Workload;
 - 2.4 Recognition;
 - 2.5 Benefits; and
 - 2.6 Support System?
- 3 What is level of a teacher's professional skills in terms of:
 - 3.1 Organizational Skills;
 - 3.2 Human Relations Skills;
 - 3.3 Communication Skills; and
 - 3.4 Leadership Skills?
4. What is the level of teachers' job performance as to the IPCRF?
5. Is there a significant relationship between the demographic profile of teachers to their professional skills?
6. Is there a significant relationship between the demographic profile of teachers to their job performance?
7. Does the teacher's career fulfillment have significant relationship to their professional skills?

8. Does the teacher's career fulfillment have a significant relationship with their job performance?

2. METHODOLOGY

Quantitative research, according to Sheard (2018), focuses on data that is numerical. This study's research design combined a quantitative strategy with statistical treatment based on correlation. This design looked at the correlations between the variables of interest and determined the strengths and directions of these correlations. Using correlational analysis and numerical data collection, the study looked for patterns, dependencies, or potentially predictive correlations between variables.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis and interpretation of data gathered to answer the sub problem relative to the main problem of this study. This part discusses the findings of the study based on the research questions.

Status of Demographic Profile of the Respondents

Demographic profile, in this study this refers to the respondents' age, sex, length of service, and position.

Status of Demographic Profile of the Respondents in terms of Age

The status of Demographic Profile of the respondents in terms of age was shown in Figure 3, which shows the frequency and percentage as depicted in the pie graph.

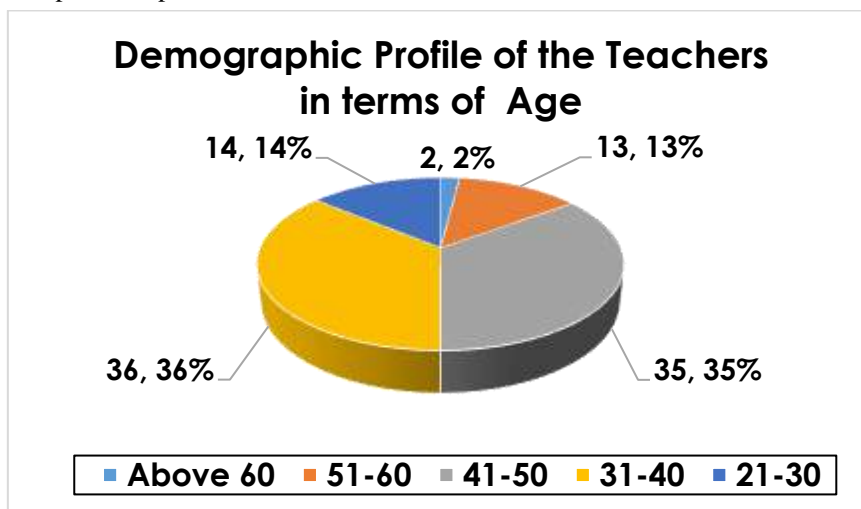


Figure 3. Pie graph showing the status of Demographic Profile in terms of Age.

It was found that most of the respondents belong to the age bracket of 31 - 40 which represents (36%) of the total population followed by those ages between 41- 50 years old, which is represented by thirty-five percent (35%). The third range age of the respondents belong to the age bracket of 21 - 30 years old comprising fourteen percent (14%), closely followed by 51 - 60 years old which comprises thirteen percent (13%) and lastly, age of the respondents belong to the age bracket of 50 and above years old fell within two percent (2%).

This suggests that a significant majority, specifically seventy one percent (71%), of the participants in the survey consists of

middle-aged teachers. It is worth noting that the remaining proportion, which is twenty nine percent (29%), comprises newly hired teachers or those nearing retirement age, reflecting a diverse demographic within the teaching population.

Age is defined as the length that somebody or something has existed.

Status of Demographic Profile of the Respondents in terms of Gender

The Demographic Profile of the respondents is illustrated in Figure 4, displaying the distribution based on sex. This

information is visually presented through a pie graph, highlighting both the frequency and percentage of male and female participants.

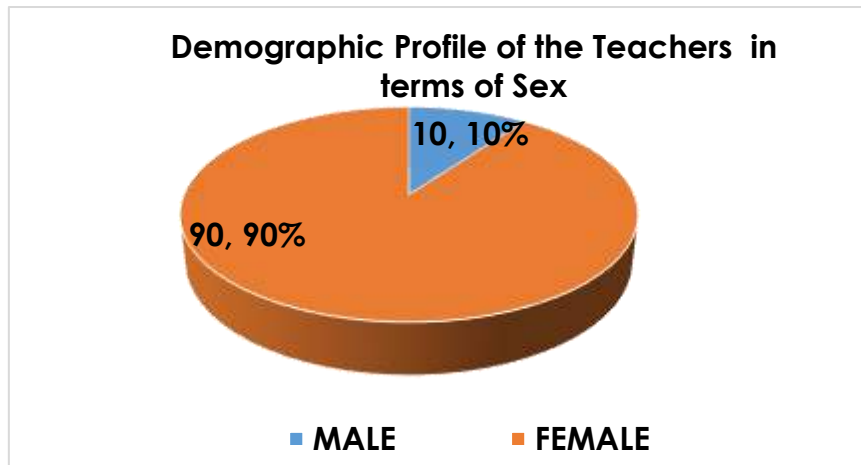


Figure 4. Pie graph showing the status of Demographic Profile in terms of Sex

It was found out that most of the respondents are female, which represented by ninety (90) or ninety percent (90 %). The other respondents are male, which are represented only by ten (10) or ten percent (10 %).

This implies that the teaching profession is mainly comprised of female teachers, indicating a significant imbalance in gender representation within the educational field.

Sex, a biological classification, is usually assigned to

individuals at birth according to their physical traits, which help differentiate between the male and female genders, shaping their identities from an early stage in life based on these natural distinctions.

Status of Demographic Profile of the Respondents in terms of Length of Service

The status of Demographic Profile of the respondents in terms of length of service is shown in Figure 5, which shows the frequency and percentage as depicted in the pie graph.

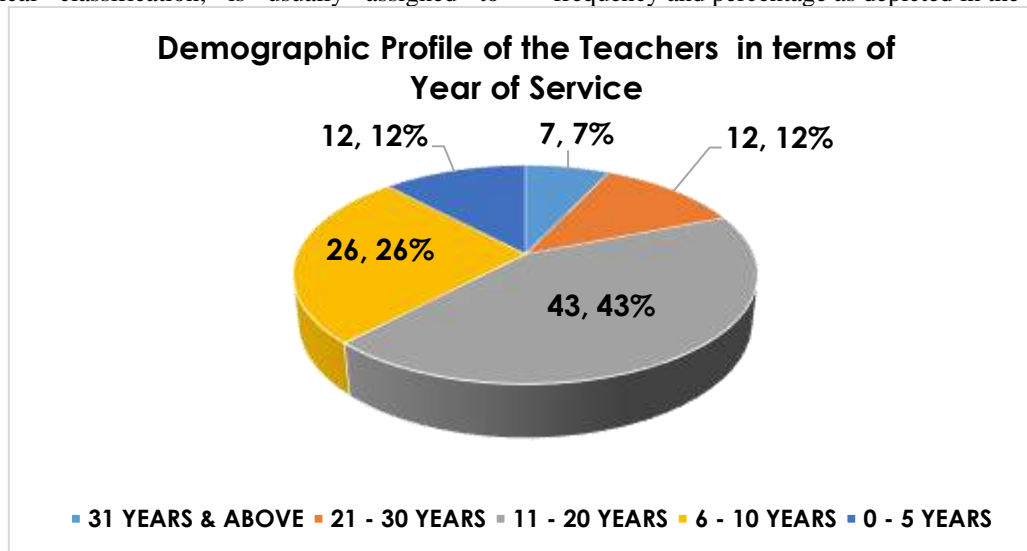


Figure 5. Pie graph showing the status of Demographic Profile in terms of Length of Service

It was found that most of the respondents belong to the of 11-20 years length of service represented by forty-three percent (43) or forty-three percent (43%). Followed by teachers who are between 6-10 years in the service which is twenty-six (26) or twenty-six percent (26%). The third range of the respondents are tied between those who are 21-30 years and 0-5 years which are both twelve (12) or twelve percent (12%). Lastly are those teachers who have been in the service for more than 31 years

which comprises of seven (7) or seven percent (7%).

Figure 5 shows eighty eight percent (88%) of the respondents are already above 10 years in service and the remaining twelve percent (12%) belongs to the newly hired teacher.

Length of service is defined as the number of years the teacher has been employed in the Department of Education.

Status of Demographic Profile of the Respondents in terms of Position

The status of Demographic Profile of the respondents in terms

of position is shown in Figure 6, which shows the frequency and percentage as depicted in the pie graph.

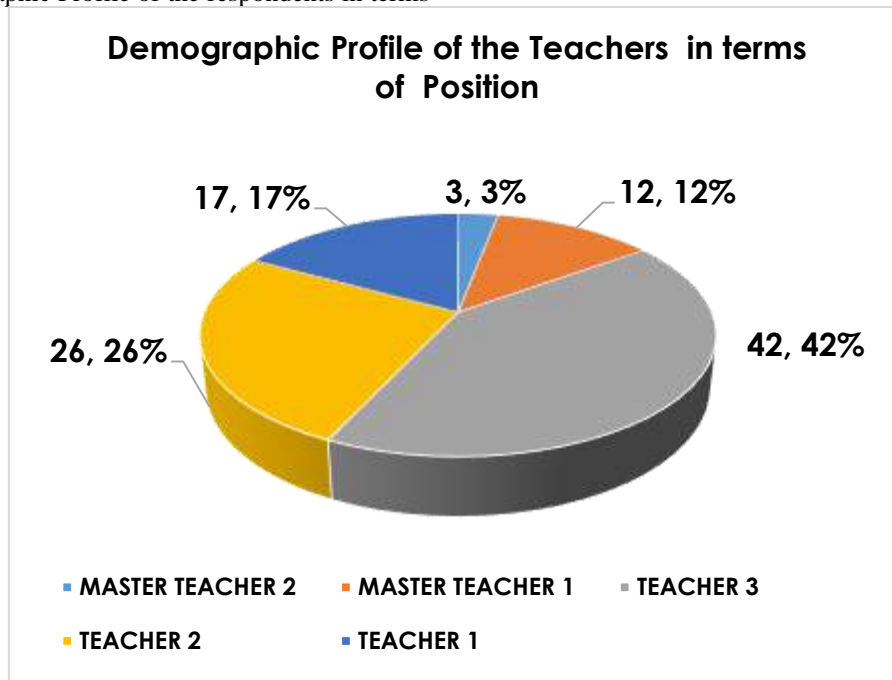


Figure 6. Pie graph showing the status of Demographic Profile in terms of Position.

It was found that most of the respondents are Teacher 3, which is represented by 42 (42) or forty-two percent (42 %). Followed by Teacher 2 comprised of twenty-six (26) or twenty-six percent (26%). The third range of the respondent belongs to Teacher I which consists of seventeen (17) or seventeen percent (17%). Coming in fourth are Master Teacher I with twelve (12) respondents or twelve percent (12%). And lastly are Master Teacher II which comprises three (3) or three percent (3%) of the total population.

In Figure 6, it can be noted that eighty five percent (85%) of teacher respondents belong to the proficient level or Teachers 1 to 3, and the remaining fifteen percent (15%) or highly proficient are Master Teachers 1 & 2.

Position in the Department of Education refers to the specific position held by teaching personnel. This role typically determines their duties, responsibilities, and level of authority within the educational institution.

Status of Career Fulfillment Factors of the Respondents

The concept of career fulfillment, as examined in this particular study, refers to the overall sense of contentment and satisfaction that individuals experience in relation to their chosen occupation. This includes their level of satisfaction with various aspects such as salary, working conditions, workload, recognition for their efforts, benefits provided by their employer, and the support system within their workplace. These factors, including job satisfaction, recognition for accomplishments, opportunities for growth, and work-life balance, are crucial indicators of an individual's career satisfaction, influencing their well-being, sense of purpose, and enthusiasm at work.

Level of Career Fulfillment in terms of Salary

Table 2 presents the level of teacher's career fulfillment in terms of salary.

Table 2. Level of Teacher's Career Fulfillment in Terms of Salary

STATEMENTS	MEAN	SD	REMARKS
1. I am satisfied with my salary.	3.71	0.83	Agree
2. I believe my salary is competitive with the market.	3.54	0.87	Agree
3. I feel financially secure in my current job.	3.64	0.89	Agree
4. I receive regular salary increments based on performance.	3.70	0.97	Agree
5. My salary is commensurate with my qualifications and experience.	3.86	0.77	Agree
6. I receive bonuses or incentives based on achievements.	4.10	0.75	Agree
7. I am satisfied with the frequency of salary payments.	3.83	0.88	Agree



8. My salary reflects the cost of living in my area.	3.61	0.86	Agree
9. My salary is competitive with other employers in the education sector.	3.56	0.86	Agree
10. I am satisfied with the transparency of the salary structure.	3.66	0.89	Agree
Weighted Mean			3.72
Standard Deviation			0.86
Verbal Interpretation			Fulfilled

Table 2 reveals the level of career fulfillment in terms of salary with a mean of 3.71 and a standard deviation of 0.83. In terms of having a competitive salary, teacher’s salary fulfillment is at a mean of 3.54 and a standard deviation of 0.87. The table also indicates that teacher’s financial security is at a mean of 3.64 and standard deviation of 0.89. As for teachers’ fulfillment in receiving a regular salary increment based on their performance, it got a mean of 3.7 or a standard deviation of 0.97. Teacher’s salary commensuration their qualifications and experience garnered an average of 3.86 and a standard deviation of 0.77. In terms of receiving bonuses and incentives based on achievements, teacher’s fulfillment stands at 4.10 on average and a standard deviation of 0.75. When asked about satisfaction in the frequency of salary payment the computed mean is 3.83 or a standard deviation of 0.88. The table also shows that teachers’ salary reflects the cost of living in their area stands at an average of 3.61 and a standard deviation of 0.86. The competitiveness of teacher’s salary in comparison with other teachers in the education sector stands with a mean of 3.56 or a

standard deviation of 0.86. Finally, teacher’s fulfillment on the transparency of salary structure is at a mean of 3.66 and a standard deviation of 0.89.

It can be gleaned from Table 2, that the level of career fulfillment in terms of salary is 3.72 with “Fulfilled” as verbal interpretation. The standard deviation of 0.86 indicates that the level of career fulfillment in terms of salary can be interpreted as “highly valid”.

This specific implication suggests that teachers, for the most part, feel content and gratified with their salary, signifying a high level of satisfaction and fulfillment in their monetary compensation.

Level of Career Fulfillment in terms of Working Condition
 Table 3 presents the level of Teacher’s Career Fulfillment in terms of Working Condition.

Table 3. Level of Teacher’s Career Fulfillment in terms of Working Condition

STATEMENTS	MEAN	SD	REMARKS
1. I am satisfied with my working conditions.	4.04	0.63	Agree
2. My workplace is comfortable and conducive to work.	4.13	0.72	Agree
3. I have the necessary equipment and resources to perform my job effectively.	4.05	0.72	Agree
4. The physical environment of my workplace promotes well-being.	4.12	0.73	Agree
5. Safety measures are in place and effectively enforced.	4.22	0.68	Agree
6. I have access to necessary technological tools for my job.	4.07	0.73	Agree
7. The lighting and ventilation in my workplace are adequate.	4.14	0.71	Agree
8. My workspace is organized and ergonomically designed.	4.17	0.67	Agree
9. I have a quiet and distraction-free workspace.	4.12	0.70	Agree
10. The cleanliness and maintenance of my workplace are satisfactory.	4.19	0.63	Agree
Weighted Mean			4.13
Standard Deviation			0.69
Verbal Interpretation			Fulfilled

Table 3 reveals the level of career fulfillment in terms of working conditions. It shows that teachers are fulfilled with their working conditions by getting a mean of 4.04 and a standard deviation of 0.63. When it comes to their workplace being comfortable and conducive, the table indicates a mean of 4.13 and a standard deviation of .72. Results show that the

teachers have necessary equipment and resources in performing their job effectively with an average of 4.05 with a standard deviation of 0.72. Indicators show that the physical environment or their workplace promote teachers’ well-being having a mean of 4.12 and a standard deviation of 0.73. When it comes to the safety measures that are in-place and enforced



effectively, teachers' fulfillment has a mean score of 4.22 and a standard deviation of 0.68. Then there is their access to necessary technological tools for their job, it gained an average of 4.07 and a standard deviation of 0.73. In terms of lighting and ventilation in their workplace if it is adequate, teachers' fulfillment is at a level of 4.14 and a standard deviation of 0.71. It can also be seen in the table that teachers' fulfillment in their workspace as being organized and ergonomically designed garnered a mean of 4.17 and a standard deviation of 0.67. Teachers' fulfillment with having a quiet and distraction-free workspace is at a mean level of 4.12 and a standard deviation of 0.70. Finally, teachers' fulfillment in terms of cleanliness and maintenance of my workplace are a mean level of 4.19 and a

standard deviation of 0.63.

The table presents significant findings indicating that the mean score recorded was 4.13, accompanied by a standard deviation of 0.69. These statistical values align with the verbal interpretation labeled as "Fulfilled."

Level of Career Fulfillment in terms of Workload

In Table 4, the data displays the different levels of Teacher's Career Fulfillment associated with varying degrees of Workload, shedding light on how workload affects teachers' overall satisfaction and fulfillment in their careers.

Table 4. Level of Teacher's Career Fulfillment in Terms of Workload

STATEMENTS	MEAN	SD	REMARKS
1. My workload is manageable.	4.12	0.62	Agree
2. I am able to maintain a healthy work-life balance.	4.02	0.74	Agree
3. I am satisfied with the distribution of tasks.	3.93	0.71	Agree
4. Deadlines and expectations for tasks are reasonable.	3.68	0.89	Agree
5. Workload adjustments are made to accommodate individual needs.	3.91	0.77	Agree
6. There are opportunities for professional development to handle workload effectively.	4.07	0.69	Agree
7. I receive support in managing my workload from my superiors.	4.09	0.75	Agree
8. Collaboration and teamwork help distribute workload effectively.	4.27	0.65	Strongly Agree
9. I have access to tools or technology that streamline tasks.	4.06	0.66	Agree
10. Workload adjustments are made based on feedback and evaluations.	3.99	0.75	Agree
Weighted Mean			4.01
Standard Deviation			0.74
Verbal Interpretation			Fulfilled

Table 4 reveals the level of career fulfillment in terms of workload. Results indicate that a teacher's workload is manageable, having gained a mean of 4.12 and a standard deviation of 0.62. The ability to maintain a healthy work-life balance shows a mean of 4.02 and a standard deviation of 0.74. Furthermore, it shows that teachers are satisfied with the distribution of tasks exhibiting a mean of 3.93 and a standard deviation of 0.71. When it comes to deadlines and expectations for tasks among teachers should be reasonable, results show a mean of 3.68 with a standard deviation of 0.89. The adjustments in teachers' workload are made to accommodate individual needs show an average of 3.91 and a standard deviation of 0.77. It can also be seen that teachers are provided with opportunities for professional development to handle workload effectively giving a mean of 4.07 and a standard deviation of 0.69. Teacher's fulfillment in terms of receiving support in managing my workload from their superiors exhibits an average of 4.09 and a standard deviation of 0.75. It also reveals that collaboration and teamwork helps teachers distribute workload effectively indicating a mean score of 4.27 and a standard deviation of 0.65. Teacher's fulfillment in having access to tools or technology that streamline tasks reflects an average of

4.06 and a standard deviation of 0.66. Lastly, teacher's workload adjustments are being made based on feedback and evaluations display a mean of 3.99 and a standard deviation of 0.75.

The table reveals that the mean score is 4.01 and standard deviation are 0.53 respectively with verbal interpretation of "Fulfilled".

The standard deviation of 0.74 indicates that the ratings given by the respondents on the teacher's career fulfillment in terms of workload were on the same range.

This indicates that teachers are successfully handling their workload in a manner that allows them to feel content and fulfilled with the tasks they are responsible for, all of which conform to a level that is deemed reasonable and acceptable.

Level of Career Fulfillment in terms of Recognition

Table 5 presents the Level of Career Fulfillment in terms of Recognition.



Table 5. Level of Teacher’s Career Fulfillment in terms of Recognition

STATEMENTS	MEAN	SD	REMARKS
1. I feel recognized and appreciated for my contributions.	4.11	0.85	Agree
2. My achievements are acknowledged by my superiors.	4.16	0.81	Agree
3. There are opportunities for career advancement and growth.	4.06	0.75	Agree
4. Recognition includes both formal and informal appreciation.	4.19	0.81	Agree
5. Colleagues acknowledge and celebrate each other's successes.	4.23	0.62	Strongly Agree
6. The recognition system is transparent and fair.	4.12	0.83	Agree
7. Contributions to team success are valued and recognized.	4.18	0.76	Agree
8. Recognition includes non-monetary rewards and incentives.	4.16	0.79	Agree
9. Opportunities for recognition are available at various career stages.	4.18	0.72	Agree
10. Opportunities are given fairly to everyone.	4.10	0.73	Agree
Weighted Mean			4.15
Standard Deviation			0.77
Verbal Interpretation			Fulfilled

In Table 5, the data illustrates the extent of career fulfillment with respect to acknowledgment. Notably, the findings indicate that teachers perceive a high level of appreciation and validation for their efforts, as evidenced by a mean score of 4.11 and a standard deviation of 0.85. Moreover, the statistics show that teachers receive considerable recognition from their superiors, with an average rating of 4.16 and a standard deviation of 0.81. When it comes to teacher’s having opportunities for career advancement and growth data shows a mean of 4.06 and a standard deviation of 0.75. It also shows that teachers recognition includes both formal and informal appreciation having a mean of 4.19 and a standard deviation of 0.81. It can also be seen that their colleagues acknowledge and celebrate each other's successes coming with an average of 4.23 and a standard deviation of 0.62. Data shows that the recognition system for teachers is transparent and fair indicating a mean score of 4.12 and a standard deviation of 0.83. The contributions teachers make for the team to succeed being valued and recognized stands with an average of 4.18 and a standard deviation of 0.76. It reveals that teacher’s recognition includes both non-monetary rewards and incentives giving it a mean score of 4.16 and a standard deviation of 0.79. Opportunities for teacher’s recognition are readily available at various career stages showing an average of 4.18 and a standard

deviation of 0.72. The teacher, after careful analysis, found that the fulfillment derived from the equitable distribution of opportunities among all individuals received a commendable mean score of 4.10, with a relatively low standard deviation of 0.73.

The table illustrates that the mean score is precisely calculated at 4.15, accompanied by a corresponding standard deviation of 0.77. The statistical figures presented are highly consistent with the subjective assessment of "Fulfilled." The narrow standard deviation of 0.77 further supports this congruence, signifying a level of uniformity among the participants' ratings, particularly related to recognition.

This implies that teachers are receiving adequate recognition and appreciation from their superiors and colleagues based on their performance evaluations. The significant level of fulfillment highlights how schools are implementing their own structured system.

Level of Career Fulfillment in terms of Benefits

In Table 6, data is presented reflecting the extent to which teachers find career fulfillment by assessing the benefits associated with their profession.

Table 6. Level of Teacher’s Career Fulfillment in terms of Benefits

STATEMENTS	MEAN	SD	REMARKS
1. I am satisfied with the benefits provided by my employer.	3.85	0.87	Agree
2. The benefits offered meet my needs and expectations.	3.83	0.88	Agree
3. I have access to adequate healthcare and other employee benefits.	3.63	0.94	Agree
4. The benefits include retirement and pension plans.	3.98	0.82	Agree
5. The benefits package is communicated clearly and is easy to understand.	3.76	0.97	Agree
6. There are opportunities to customize benefit options according to individual needs.	3.78	0.98	Agree
7. Benefits extend to employees' dependents when needed.	3.72	0.94	Agree
8. Benefits include provisions for personal development and education.	3.77	0.95	Agree



9. The process of accessing and utilizing benefits is straightforward.	3.78	0.98	Agree
10. The benefits package is competitive with industry standards.	3.67	1.03	Agree
Weighted Mean			3.78
Standard Deviation			0.94
Verbal Interpretation			Fulfilled

Results indicate that teachers are still satisfied with the benefits provided by the department, indicating a mean score of 3.85 and a standard deviation of 0.87. Their fulfillment on benefits being offered meet their needs and expectations shows an average of 3.83 and a standard deviation of 0.88. Teacher’s fulfillment on having access to adequate healthcare and other employee benefits reveals a mean score of 3.63 and a standard deviation of 0.94. Teacher’s fulfillment on benefits, including retirement and pension plans shows an average of 3.98 and a standard deviation of 0.82. It shows that the benefit package given to teachers is communicated clearly and is easy to understand for it to have a mean of 3.76 and a standard deviation of 0.97. Then, there are also the opportunities to customize benefit options according to individual needs, teachers respond to this question with a mean score of 3.78 and a standard deviation of 0.98. Also, teacher’s benefits extended to employees' dependents when needed shows an average of 3.72 and a standard deviation of 0.94. Furthermore, teacher’s benefits that include provisions for personal development and education stands with a mean score of 3.77 and a standard deviation of 0.95. Then, there is the process of accessing and utilizing benefits being straightforward is given a mean score of 3.78 and a standard deviation of 0.98. Lastly, the teacher’s benefits package being competitive with industry standards, data shows a mean of 3.67 and a standard deviation of 1.03.

In Table 6, the data presents a mean score of 3.78 with a standard deviation of 0.94, suggesting a "Fulfilled" level of fulfillment. These values indicate a consistent experience of career fulfillment among individuals within a confined range of workload-related factors, reflecting a sense of contentment and fulfillment showing balance in their professional engagements.

This implies that educators experience immense happiness and fulfillment when they actively engage with the various resources and assistance provided by the Department of Education. Consequently, this not only enhances their professional satisfaction but also plays a significant role in enhancing their overall state of happiness and contentment. It underscores the vital importance of having access to such support systems in order to empower, support, and enable educators to excel in their respective roles, thereby fostering a more conducive environment for growth and success within the education sector.

Level of Career Fulfillment in terms of Support System

Table 7 provides a detailed breakdown of the Level of Teacher’s Career Fulfillment specifically focusing on the Support System in place to help teachers achieve their professional goals and enhance their overall job satisfaction.

Table 7. Level of Career Fulfillment in terms of Support System

STATEMENTS	MEAN	SD	REMARKS
1. I receive sufficient support and guidance from my colleagues.	4.32	0.57	Strongly Agree
2. My superiors are approachable and provide support when needed.	4.20	0.77	Strongly Agree
3. There is a strong support system in place for teachers in Pila Sub-Office.	4.20	0.65	Strongly Agree
4. The support system encourages professional growth and development.	4.26	0.63	Strongly Agree
5. Support includes mentoring and coaching for career advancement.	4.26	0.71	Strongly Agree
6. Colleagues collaborate and share resources effectively.	4.31	0.58	Strongly Agree
7. There are regular opportunities for knowledge-sharing and training.	4.23	0.60	Strongly Agree
8. Support extends to addressing personal challenges and well-being.	4.26	0.75	Strongly Agree
9. The support system fosters a positive and inclusive work environment.	4.25	0.67	Strongly Agree
10. Support includes access to counseling and mental health services.	4.19	0.79	Agree
Weighted Mean			4.25
Standard Deviation			0.67
Verbal Interpretation			Highly Fulfilled



In Table 7, the data on Teacher’s Career Fulfillment regarding their Support System indicates that teachers indeed benefit from a significant level of support and guidance from their colleagues. This is clearly demonstrated by the mean score of 4.32 and a standard deviation of 0.57, underscoring the effective collaboration and assistance teachers receive within their professional environment. It also reveals that superiors are approachable and provide support when needed indicating an average of 4.20 and a standard deviation of 0.77. Furthermore, it also shows that there is a strong support system in place for teachers in Pila Sub-Office thus having a mean of 4.20 and a standard deviation of 0.65. Gathered data also indicates that the support system for teachers encourages their professional growth and development with a mean of 4.26 and a standard deviation of 0.63. Likewise, the support being given includes mentoring and coaching for teachers’ career advancement is acknowledged with a score of 4.26 and a standard deviation of 0.71. It is also evident that their colleagues collaborate and share resources effectively showing an average of 4.31 and a standard deviation of 0.58. Moreover, there are regular opportunities for knowledge-sharing and training for teachers indicating a mean of 4.23 and a standard deviation of 0.6. This support system also extends to addressing personal challenges and well-being thus gaining an average of 4.26 and a standard deviation of 0.75. Data displays that the support system for teachers fosters a positive and inclusive work environment showing a mean of 4.25 and a standard deviation of 0.67. Lastly, this type of support includes access to counseling and mental health services where teachers answer gave a mean score of 4.19 and a standard deviation of 0.79.

The table reveals that the mean score is 4.25 and standard deviation are 0.67 respectively with verbal interpretation of “Highly Fulfilled”. The standard deviation of 0.67 indicates that

the ratings given by the respondents on career fulfillment in terms of support system were on the same range.

The findings of the study indicate that teachers experience a profound sense of fulfillment as a result of the commendable support system provided by the Department of Education (DepEd). This positive relationship between educators and the institution significantly contributes to the overall satisfaction and professional growth of teachers within the educational system.

Level of Professional Skills

In this study, the dependent variable pertains to various aspects of teachers’ professional competencies encompassing organizational skills for effective task management, human relations skills for fostering positive interactions, communication skills crucial for conveying information clearly, and leadership skills essential for guiding and inspiring others towards common goals. These key components, such as teaching methodology, student engagement levels, curriculum development skills, and classroom management techniques, collectively contribute to a comprehensive assessment of teachers’ performance in their educational capacities. This underscores the diverse range of competencies encompassed within their professional expertise and reinforces the intricate balance needed to succeed in their roles.

Level of Professional Skills in terms of Organizational Skill

Table 8 shows the Level of Teacher’s Professional Skill specifically in relation to their Organizational Skill, offering valuable information on how educators manage and coordinate tasks within educational settings.

Table 8. Level of Professional Skills in terms of Organizational Skills

STATEMENTS	MEAN	SD	REMARKS
1. I have good organizational skills.	4.35	0.53	Strongly Agree
2. I am able to effectively manage tasks and responsibilities.	4.42	0.54	Strongly Agree
3. My organizational skills positively impact my job performance.	4.38	0.60	Strongly Agree
4. I am organized in planning and delivering lessons.	4.46	0.56	Strongly Agree
5. I can efficiently track and assess student progress.	4.49	0.58	Strongly Agree
6. I effectively manage classroom materials and resources.	4.43	0.59	Strongly Agree
7. I am proficient in time management.	4.44	0.60	Strongly Agree
8. I maintain accurate records and documentation.	4.47	0.57	Strongly Agree
9. I am able to adapt to changes in the curriculum.	4.55	0.54	Strongly Agree
10. I am organized in conducting assessments and evaluations.	4.47	0.55	Strongly Agree
Grand Mean	4.44	0.57	Strongly Agree
Verbal Interpretation			Highly Skilled

In Table 8, the data indicates that teachers exhibit a high degree of proficiency in organizational skills, as reflected by an impressive mean score of 4.35, with a narrow standard deviation of only 0.53. Furthermore, the findings reveal that teachers are adept at effectively managing their tasks and responsibilities, demonstrating a mean rating of 4.42, complemented by a standard deviation of 0.54. These results

underscore the competence and efficiency of teachers in handling their professional duties. Next on teacher’s organizational skills to positively affect their job performance, it garnered an average of 4.38 and a standard deviation of 0.60. About being organized in planning and delivering lessons, the mean score was 4.46 and a standard deviation of 0.56. Teachers efficiently track and assess student progress, an average of 4.49



and a standard deviation of 0.58. Then teacher's perception to effectively manage classroom materials and resources, it shows a mean of 4.43 and a standard deviation of 0.59. It reveals that teachers are proficient in time management with a mean of 4.44 and a standard deviation of 0.60. In terms of maintaining accurate records and documentation, it can be seen with a mean 4.47 and a standard deviation of 0.57. A teacher's ability to adapt to changes in the curriculum shows a mean score of 4.55 and a standard deviation of 0.54. Lastly, when it comes to conducting assessments and evaluations, being organized plays a pivotal role in achieving success. Evidence suggests that the mean score for this ability is 4.47, with a standard deviation of 0.55, highlighting its importance in ensuring accuracy and efficiency in the evaluation process.

The table presents the findings that the mean score was calculated to be 4.44, indicating a "Highly Skilled" level, with a corresponding standard deviation of 0.57. This standard deviation suggests that the ratings provided by participants for the organizational skills of teachers were closely clustered around the mean value, showcasing a consistent evaluation across responses.

This suggests that the majority of teachers possess advanced professional skills when it comes to organizational capabilities, indicating that they excel in managing tasks efficiently and effectively within their educational roles.

Level of Professional Skills in terms of Human Relations Skill

Table 9 presents the Mean Level of Professional Skill in terms of Human Relations Skill.

Table 9. Level of Professional Skills in terms of Human Relations Skill

<i>STATEMENTS</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
1. I have good human relations skills.	4.58	0.53	Strongly Agree
2. I am able to build positive relationships with colleagues and students.	4.56	0.51	Strongly Agree
3. My human relations skills positively affect my job performance.	4.60	0.51	Strongly Agree
4. I effectively resolve conflicts in the workplace.	4.50	0.52	Strongly Agree
5. I promote a positive and inclusive classroom environment.	4.57	0.52	Strongly Agree
6. I am empathetic and understanding towards students.	4.64	0.51	Strongly Agree
7. I actively engage with parents and guardians.	4.64	0.53	Strongly Agree
8. I mentor and support newer teachers when needed.	4.54	0.58	Strongly Agree
9. I collaborate effectively with other educators.	4.57	0.52	Strongly Agree
10. I encourage teamwork and cooperation among students.	4.64	0.51	Strongly Agree
Grand Mean	4.59	0.52	Strongly Agree
Verbal Interpretation			Highly Skilled

Table 9 exhibits that teachers perceive that they have good human relations skills giving a mean score of 4.58 and a standard deviation of 0.53. It reveals that teachers are able to build positive relationships with colleagues and students allowing the mean score of 4.56 and a standard deviation of 0.51. Their human relations skills positively affect my job performance shows a mean of 4.60 and a standard deviation of 0.51. The effective resolving of conflicts in the workplace shows a mean of 4.50 and a standard deviation of 0.52. Next, teachers' promotion of a positive and inclusive classroom environment shows a mean of 4.57 and a standard deviation of 0.52. Teachers also perceive that they are empathetic and understanding towards students reveals a mean score of 4.64 and a standard deviation of 0.51. It shows that teachers are actively engaged with parents and guardians giving a mean of 4.64 and a standard deviation of 0.53. It also reveals that they mentor and support newer teachers when needed give us a mean of 4.54 and a standard deviation of 0.58. Collaborating effectively with other educators gained a mean score of 4.57 and a standard deviation of 0.52. Lastly, they encourage

teamwork and cooperation among students and give us a mean score of 4.64 and a standard deviation of 0.51.

The table presents the mean score of 4.59 and the corresponding standard deviation of 0.52, signifying a level of proficiency classified as "Highly Skilled." The standard deviation of 0.52 indicates that respondents consistently rated the teacher's organizational skills within a narrow range, reflecting strong agreement among their assessments.

This clearly indicates that teachers of Pila Sub-Office possess exceptional human relations skills. The phrase "Highly Skilled," underscores the elementary teachers' elevated standing in terms of their adeptness in managing human relationships and interpersonal interactions.

Level of Professional Skill in terms of Communication Skills

Table 10 presents the Level of Professional Skill in terms of Communication Skills



Table 10. Level of Professional Skill in terms of Communication Skills

<i>STATEMENTS</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
1. I have good communication skills.	4.37	0.64	Strongly Agree
2. I am able to effectively communicate with students and colleagues.	4.52	0.58	Strongly Agree
3. My communication skills positively affect my job performance.	4.43	0.61	Strongly Agree
4. I use various communication channels to engage students.	4.49	0.61	Strongly Agree
5. I provide clear and concise instructions to students.	4.57	0.56	Strongly Agree
6. I actively listen to students and colleagues.	4.59	0.55	Strongly Agree
7. I effectively use technology for communication.	4.49	0.59	Strongly Agree
8. I communicate learning objectives and expectations clearly.	4.61	0.54	Strongly Agree
9. I am approachable and encourage open communication.	4.63	0.55	Strongly Agree
10. I provide constructive feedback to students and colleagues.	4.56	0.59	Strongly Agree
Grand Mean <i>Verbal Interpretation</i>	4.53	0.58	Strongly Agree Highly Skilled

Table 10 reveals the level of Professional Skill in terms of Communication. It shows that teachers are perceived to have good communication skills with a mean of 4.37 and a standard deviation of 0.64. It also shows that they are able to effectively communicate with students and colleagues giving a mean of 4.52 and a standard deviation of 0.58. It also stands that teachers communication skills positively affect their job performance shows a mean of 4.43 and a standard deviation of 0.61. Their use of various communication channels to engage students reveals a mean of 4.49 and a standard deviation of 0.61. They also provide clear and concise instructions to students giving us a mean of 4.57 and a standard deviation of 0.56. It can also be seen that teachers actively listen to students and colleagues displaying a mean score of 4.59 and a standard deviation of 0.55. The effectively use technology for communication gives a mean score of 4.49 with a standard deviation of 0.59. Teachers' ability to communicate learning objectives and expectations clearly is at a mean of 4.61 and a standard deviation of 0.54. Being approachable and encouraged open communication sets the mean to 4.63 and a standard deviation of 0.55. Finally, the provision of constructive feedback to students and colleagues shows a mean of 4.56 and a standard deviation of 0.59.

In the data presented in Table 10, it is evident that the statistical analysis unveils crucial insights regarding the respondents' proficiency level. More precisely, the mean score of 4.53, combined with a standard deviation of 0.58, sheds light on the fact that the participants collectively exhibit a high degree of skill in various aspects. This classification as "Highly Skilled" is further reinforced by the standard deviation metric of 0.58, which underscores the consistent and closely aligned ratings by the respondents, particularly in relation to essential professional skills like communication abilities.

This data indicates that teachers at Pila Sub-Office perceive themselves as exceptionally proficient in communication skills. This perception is reinforced by the statistic that eighty-eight percent (88%) of teachers have over ten years of experience in the public school system.

Level of Professional Skills in terms of Leadership Skills

Table 11 provides a detailed overview of the Level of Professional Skills of Teachers, specifically focusing on their Leadership Skill development within the educational setting.

Table 11. Level of Professional Skill in terms of Leadership Skill

<i>STATEMENTS</i>	<i>MEAN</i>	<i>SD</i>	<i>REMARKS</i>
1. I have good leadership skills.	4.29	0.63	Strongly Agree
2. I am able to take on leadership roles when required.	4.41	0.62	Strongly Agree
3. My leadership skills positively affect my job performance.	4.37	0.63	Strongly Agree
4. I contribute to decision-making processes in my school.	4.35	0.67	Strongly Agree
5. I mentor and guide junior teachers effectively.	4.36	0.64	Strongly Agree
6. I inspire and motivate students to excel academically.	4.55	0.56	Strongly Agree
7. I am proactive in identifying and addressing challenges in education.	4.48	0.59	Strongly Agree
8. I promote innovation and continuous improvement in education.	4.42	0.60	Strongly Agree
9. I facilitate professional development opportunities for educators.	4.45	0.60	Strongly Agree
10. I contribute to a positive school culture and community.	4.50	0.61	Strongly Agree
Grand Mean <i>Verbal Interpretation</i>	4.42	0.62	Strongly Agree Highly Skilled

It can be seen that teachers perceive themselves to have good leadership skills showing a mean of 4.29 with a standard deviation of 0.63. Their ability to take on leadership roles when required gives us a mean of 4.41 and a standard deviation of

0.62. They perceive that their leadership skills positively affect their job performance with a mean of 4.37 and a standard deviation of 0.63. It also shows that they contribute to decision-making processes in my school with a mean of 4.35 and a



standard deviation of 0.67. They also mentor and guide junior teachers effectively gaining a weighted average of 4.36 and a standard deviation of 0.64. Their capacity to inspire and motivate students to excel academically shows a mean of 4.55 and a standard deviation of 0.56. They also consider themselves to be proactive in identifying and addressing challenges in education showing a mean of 4.48 and a standard deviation of 0.59. Promoting innovation and continuous improvement in education shows an average of 4.42 and a standard deviation of 0.60. Facilitating professional development opportunities for educators, which have a mean rating of 4.45 and a standard deviation of 0.60, is crucial for enhancing their skills and knowledge. Furthermore, contributing to a positive school culture and community, with a mean level of 4.50 with a standard deviation of 0.61, fosters a supportive environment that benefits both students and staff.

The table above shows that the mean score of 4.42 and a standard deviation are 0.62 respectively with verbal interpretation of "Highly Skilled". The standard deviation of 0.62 indicates that the ratings given by the respondents in professional skills in terms of leadership were on the same range.

This implies that teachers in Pila Sub-Office see themselves as influential leaders not only within the school but also in their classrooms This leadership role is further strengthened by the ongoing technical support and guidance offered by our administrators, solidifying their effect on educational practices and student development.

Level of Job Performance as to their IPCRF

Table 12 shows the level of teacher’s job performance in terms of their rating in the Individual Performance Commitment and Review Form.

Table 12. Level of Job Performance in terms of their IPCRF Rating

<i>RATING</i>	<i>MEAN</i>	<i>SD</i>	<i>VERBAL INTERPRETATION</i>
<i>Individual Performance Commitment and Review Form</i>	<i>4.19</i>	<i>0.55</i>	<i>Very Satisfactory</i>
Grand Mean	4.19	0.55	Very Satisfactory

Level of Teacher’s Job Performance with regards to their Individual Performance Commitment Review Form (IPCRF)

Table 12 shows the level of teacher’s job performance with regards to their Individual Performance Commitment Review Form (IPCRF) rating.

In analyzing the feedback received from the respondents, it is important to highlight that the overall rating they provided

averages at 4.19, with the description of "Very Satisfactory". This indicates a high level of job performance expressed by the respondents of Pila Sub-Office.

Significant Relationship between Teachers’ Demographic Profile and Teachers’ Professional Skills

Table 13 provides a detailed analysis demonstrating the significant correlation between teachers' demographic profile and teacher’s professional skills within the educational context.

Table 13. Significant Relationship between Demographic Profile and Teachers’ Professional Skills

Demographic Profile		Teachers’ Professional Skills			
		Organizational Skills	Human Relations Skills	Communication Skills	Leadership Skills
Age	r-value	0.023	0.010	0.000	0.017
	Sig.(2-tailed)	0.132	0.327	0.969	0.202
	N	100	100	100	100
Sex	r-value	0.000	0.025	0.010	0.003
	Sig.(2-tailed)	0.958	0.118	0.310	0.621
	N	100	100	100	100
Length of Service	r-value	0.001	0.013	0.009	0.001
	Sig.(2-tailed)	0.735	0.260	0.359	0.735
	N	100	100	100	100
Position	r-value	0.001	0.000	0.004	0.000
	Sig.(2-tailed)	0.730	0.794	0.541	0.902
	N	100	100	100	100

Table 13 shows the significant relationship between demographic Profile and teachers’ professional skills. Based on the results, it is evident that factors such as age, sex, length of service and position do not have a significant effect on a teacher's professional skill. These findings support the notion

that teachers possess a consistent level of competence and proficiency in their roles regardless of their personal characteristics or experience in the field.

It has been established that there is no significant relationship



between demographic profile in terms with regards to age, sex, length of service, and position with teachers' professional skills in terms of organizational skills; human relations skills: communication skills; and leadership skills. The p-value indicates that there is no significant relationship between demographic profile and teachers' professional skills which is greater than the level of significant value of 0.05.

Significant Relationship between Demographic Profile and Teachers' Job Performance

Table 14 provides a detailed analysis of the correlation between various demographic factors and the job performance exhibited by teachers.

Table 14. Significant Relationship between Teacher's Demographic Profile to their Job Performance

Demographic Profile	F-value	p-value	F-Critical	Analysis
Age	1.36573	0.25167	2.46749	Not Significant
Sex	0.01181	0.91369	2.46749	Not Significant
Length of Service	1.45809	0.22111	2.46749	Not Significant
Position	1.22031	0.3074	2.46749	Not Significant

In Table 14, a notable disparity in teachers' professional skills is highlighted based on their demographic profile, indicating variations in the expertise levels across different demographic groups.

In the comprehensive analysis conducted, the research revealed that there is an absence of a statistically significant correlation between the job performance of teachers when sorted based on demographic characteristics like age, gender, length of service, and position within the organization. These results underscore the importance of looking beyond demographics when evaluating teachers' effectiveness.

The Computed F-value indicates that there is no significant Difference Teachers' Job Performance when grouped according to Demographic Profile which is less than the Critical F-Value. The p-value also indicates that there is no Significant Difference Teachers' Professional Skills when grouped according to Demographic Profile which is greater than the level of significant value of 0.05.

Significant Relationship between Teachers' Career Fulfillment and Teachers' Professional Skills

Table 15 provides a detailed analysis demonstrating the significant correlation between teachers' career fulfillment and teacher's professional skills within the educational context.

Table 15. Significant Relationship between Teachers' Career Fulfillment and Teachers' Professional Skills

Teachers' Career Fulfillment		Teachers' Professional Skills			
		Organizational Skills	Human Relations Skills	Communication Skills	Leadership Skills
Salary	r-value	0.154*	0.153*	0.003	0.001
	Sig.(2-tailed)	0.000	0.000	0.598	0.812
	N	100	100	100	100
Working Condition	r-value	0.186*	0.188*	0.007	0.024
	Sig.(2-tailed)	0.000	0.000	0.420	0.124
	N	100	100	100	100
Workload	r-value	0.151*	0.103*	0.004	0.000
	Sig.(2-tailed)	0.000	0.001	0.549	0.850
	N	100	100	100	100
Recognition	r-value	0.092*	0.156*	0.005	0
	Sig.(2-tailed)	0.002	0.000	0.499	-0.237
	N	100	100	100	100
Benefits	r-value	0.091*	0.036	0.003	0
	Sig.(2-tailed)	0.002	0.059	0.618	-0.135
	N	100	100	100	100
Support System	r-value	0.245*	0.255*	0.008	0
	Sig.(2-tailed)	0.000	0.000	0.375	-0.298
	N	100	100	100	100

***Significant at 0.05**

The study's results indicate a significant correlation between teachers' salary levels and their Career Fulfillment, particularly affecting their Organizational Skills and Human Relations, with respective r-values of 0.154 and 0.153. It is clear that financial compensation greatly shapes teachers' professional qualities, demonstrating the profound influence money can have on how

educators develop and exhibit critical attributes within their roles.

In examining Teachers Career Fulfillment related to Working Conditions, it becomes evident from the findings that there is a noteworthy association observed between Organization Skills,



with an r-value of 0.186, and Human Relations Skill, with a correlational value of 0.188. These results emphasize the significance of these particular skills in influencing the overall job satisfaction and fulfillment experienced by teachers within their work environment.

The research findings indicate that Teachers' Career Fulfillment is intricately connected to their Workload. Specifically, the study reveals a noteworthy correlation between organization skills and human relations skills, supported by respective r-value of 0.151 and 0.103. This suggests that how teachers manage their tasks and relationships significantly affects their professional satisfaction and overall success.

The research further reveals that Teachers' Career Fulfillment, particularly in terms of Recognition, is closely linked to their proficiency in Organizational Skills and Human Relations Skill. Specifically, the results illustrate a positive relationship with an r-value of 0.092 for Organizational Skills and 0.156 for Human Relations Skills. This suggests that the level of recognition teachers receive significantly influences the development and enhancement of both their Organizational Skills and Human Relations Skills, emphasizing the role that recognition plays in fostering these essential teacher competencies.

Teacher's Career Fulfillment in Terms of Benefits, the study revealed that among the array of Professional Skills identified, only Organizational Skill exhibited a statistically significant relationship, as denoted by an r-value of 0.091. This finding suggests that as the benefits afforded to teachers are fulfilled, there is an observable trend indicating a corresponding maintenance of their high levels of Organizational Skills. Such insight underscores the pivotal role played by organizational abilities in the overall satisfaction and fulfillment experienced by educators within their career trajectories.

The study conclusively showed that Teacher's Career Fulfillment is intricately linked to the presence of a robust Support System. Notably, alongside essential qualities like Organizational Skills and Human Relations Skills, the correlation coefficients of 0.245 and 0.255, respectively, demonstrate the vital role that Support Systems play in a teacher's professional satisfaction. This underscores the significance of such systems in ensuring a fulfilling career path for educators. In essence, the findings underscore that effective support mechanisms are equally fundamental to career contentment as any other measured criteria.

In terms of Teachers' Career Fulfillment with regards to Salary, Working Condition; Workload; Recognition; Benefits; and Support System are significant with regards to Organizational Skills with a p-value of 0.000, 0.000, 0.000, 0.002, 0.002, and 0.000 respectively.

With regards to Teachers' Career Fulfillment with regards to Salary, Working Condition; Workload; Recognition; Benefits; and Support System are significant to the Teachers' Professional Skills in terms of Human Relations Skills with a p-value of 0.000, 0.000, 0.001, 0.000, and 0.000 respectively. However, the variance on Benefits shows a p-value of 0.059 indicating that there is a Significant Relationship between Teachers' Career Fulfillment and Teachers' Professional Skills with regards to Benefits which is more than the level of significant value of 0.05.

In terms of Teachers' Career Fulfillment, with regards to Salary, Working Condition; Workload; Recognition; Benefits; and Support System are significant to the Teachers' Professional Skills in terms of Communication Skills; with a p-value of 0.598, 0.420, 0.549, 0.499, 0.618, and 0.375 respectively.

In terms of Teachers' Career Fulfillment, with regards to Salary, Working Condition; Workload; Recognition; Benefits; and Support System are significant with regards to Leadership Skills with a p-value of 0.812, 0.124, 0.850, -0.237, -0.135, and -0.298 respectively.

The results of the research indicate that, given the p-value exceeding 0.05, there is insufficient evidence to establish a statistically significant link between Teachers' Career Fulfillment and Teachers' Professional Skills. Consequently, it can be inferred that within the context of this study, these two variables do not exhibit a strong correlation. This lack of statistical significance raises doubts about the interrelationship between Teachers' Career Fulfillment and Teachers' Professional Skills as revealed through the study's findings.

Significant Relationship between Teachers' Career Fulfillment and Teachers' Job Performance

In the conducted study, it was found that there exists a significant correlation between teachers' level of career fulfillment and their performance as evaluated through the Individual Performance Commitment and Review Form (IPCRF).

Table 16 presents a detailed analysis of the correlation between Teachers' Career Fulfillment and Teachers' Job Performance as evaluated through the Individual Performance Commitment and Review Form (IPCRF), shedding light on the interconnection between job satisfaction and professional effectiveness among educators.

Table 16. Significant Relationship between Teachers' Career Fulfillment and Teachers' Job Performance in terms of IPCRF



Teachers' Career Fulfillment		Teachers' Job Performance
		IPCRF
Salary	r-value Sig.(2-tailed) N	0.012 0.279 100
Working Condition	r-value Sig.(2-tailed) N	0.000 0.971 100
Workload	r-value Sig.(2-tailed) N	0.002 0.700 100
Recognition	r-value Sig.(2-tailed) N	0.004 0.537 100
Benefits	r-value Sig.(2-tailed) N	0.000 0.908 100
Support System	r-value Sig.(2-tailed) N	0.043 0.039 100

***Significant at 0.05**

In Table 16, an in-depth analysis is presented, specifically examining the significant relationship between Teachers' Career Fulfillment and their Job Performance, which was measured using the IPCRF metrics. It is worth noting that the results of this study indicated that despite a range of factors — including Salary, Working Conditions, Workload, Recognition, Benefits, and Support System — having an influence on teachers' overall career fulfillment, these variables did not have a statistically significant effect on their Job Performance. This conclusion is supported by the p-value derived from the analysis, which exceeded the predetermined significance level of 0.05.

Hence, it is important to acknowledge that these mentioned factors significantly influence the overall satisfaction of teachers in their profession. However, it is crucial to understand that these elements may not be directly aligned with the specific criteria used to evaluate their performance effectively based on the established guidelines.

4. CONCLUSION AND RECOMMENDATIONS

Based on the comprehensive analysis and evaluation of the gathered data from the study, conclusive results revealed that: There is no relationship between a teacher's demographic profile to their professional skill with regards to organizational skill, human relations skills, communication skills, and leadership skills.

Further analysis revealed that factors such as a teacher's age, gender, length of service, and position do not appear to have a significant relationship to their overall job performance. This suggests that personal demographics may not be key determinants of how effectively a teacher performs in their role.

There is also no relationship between a teacher's career fulfillment in terms of salary, workload, working condition, recognition, and benefits, except for support system, the

relation between their professional skill like organizational, human relations, communication, and leadership skill are irrelevant.

Lastly, it is important to recognize that a teacher's career fulfillment may be influenced by various factors such as salary, working conditions, workload, benefits, recognition, and support system. These elements play a significant role in shaping a teacher's professional skills. Despite the importance of these factors, there seems to be a lack of clear and significant correlation between them and the actual performance a teacher displays in their educational role. This suggests that while these factors affect a teacher's overall satisfaction, they may not directly translate into improved performance within the educational environment.

Based on the findings and conclusions of the study the following recommendation were hereby given:

1. Future researchers may continue the study on teacher's career fulfillment is hereby recommended, as it can lead to a deeper understanding of how various factors influence teacher fulfillment and performance. In future research, additional factors such as work environment, professional development opportunities, and student-teacher relationships could be explored to provide a more comprehensive perspective on teacher well-being.
2. DepEd officials and administrators are encouraged to carefully analyze the data collected in this study, using it as a foundational element for developing new policies aimed at enhancing teacher satisfaction and professional growth. By leveraging the insights gained from this research, meaningful changes can be implemented to support teachers in their quest for career fulfillment.
3. Future researchers may find value in referencing this research for their own studies, or they may choose to delve deeper into the subject matter by conducting



additional research based on the findings presented here. This research lays a solid foundation for future research, offering a rich source of information and insights that could help future studies in the field. By building upon these findings, researchers can explore new avenues of inquiry and contribute to the growing body of knowledge in this area, ultimately enriching the scholarly discourse on the subject.

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EXPERT AND LANGUAGE FALLACY AMONG ESL LEARNERS OF DIFFERENT TERTIARY PROGRAMS UNDER ENGLISH-CENTRIC PEDAGOGY: A PHENOMENOLOGICAL STUDY

Jgence Joelle Faylon Parcon

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study was conducted to determine, examine, analyse, and understand the lived experience of ESL Learners of different Tertiary Programs under English-Centric Pedagogy in relation to Expert and Language Fallacy. This study specifically sought to answer the following (1.) How do you find your teaching-learning experience with English as the medium of instruction? (2) Do you find difficulties understanding or comprehending lessons due to the medium of instruction? and (3) How do you feel during class when a teacher is fluent in English?

The study utilized a Phenomenological Research design to explore the lived experiences of the selected participants. Additionally, the paper was limited to selected 1st Year students of Laguna State Polytechnic University – San Pablo City Campus of different colleges who are enrolled in the A.Y. 2023-2024.

The findings showed the following superordinate themes: English as a Medium of Instruction, Psychological Factors, and Linguistic Barriers. These also generated the following subordinate themes Tailoring Teaching Methods to Learning Styles, Code Switching, Anxiety and Fear of Speaking, Low Self-esteem due to Language Proficiency, Vocabulary Usage, Grammar Rules, and Pronunciation Challenges. The findings showed that the participants were unable to express their ideas and thoughts while using the English language as a conversation medium. It was also observed that the participants were cautious while conversing with their instructors since they did not trust them to offer sound and comprehensive views and opinions this causes them to become passive learners. These were then noted to be part of the fallacy filter, specifically Language and Expert Fallacy.

In conclusion, there is shared experience between all the participants where it was noted that both the English language and their instructor played a vital role in their teaching-learning experience. It can be inferred that there are nuances in the transaction of learning between the teacher and the students where a space for reasoning formation goes through a fallacy filter. This filter affects the students conscious understanding of the discourse. However, other aspects of the learning experience should be explored to further understand how this filter affects the students.

Therefore, it is recommended for ESL institutions and those involved with its pedagogy, to examine Language and Expert Fallacy as filters in reasoning formation of students specially with English as the medium of discourse. Also, instructors should be keen in making their teaching strategies and methodologies to be flexible to accommodate a broader audience specifically ESL learners.

KEYWORDS: ESL Learners; Tertiary Programs; English-Centric Pedagogy

1. INTRODUCTION

There are multiple factors to consider on how and why students learn within the classroom. These factors may contribute to the overall learning and understanding of the students. Teachers were ranked the most influential factor in student's achievement (Hattie, 2009). Their academic practices play a vital role in a student's academic growth. Moreover, evidence suggests that teachers' implicit biases and assumptions may unintentionally influence their interactions with students, potentially affecting their academic outcomes and prospects (Gill et al., 2019).

A fallacy refers to a mistaken or misleading belief, argument, or reasoning process that can lead to erroneous conclusions or decisions. Fallacies in education can have significant consequences as they can hinder critical thinking, distort understanding, and impact the overall quality of education.

One such fallacy is Appeal to Authority which states that arguing a particular idea or concept in education is valid simply because an authority figure, like a famous educator or expert,

endorses it. This overlooks the need for evidence and critical analysis. This can lead to multiple issues such as low comprehension, less analytical argumentation, and even passive learning.

According to research conducted by Hwang and Evans (2015), students who are not fluent in English tend to rely heavily on their teacher's language skills, even if the teacher's content knowledge is limited. In this study, students who were not fluent in English reported feeling less engaged in the learning process when their teacher spoke English fluently but did not provide accurate information. This suggests that the use of English as the medium of instruction in classrooms where students are not fluent in the language can result in passive learning.

Another study by Chen (2017) found that the use of a second language in the classroom can create a language barrier that limits students' ability to engage with the content of the lesson. In this study, students who were not fluent in English reported feeling less confident about their ability to understand and engage with the lesson when the teacher spoke English. This



suggests that the use of a second language in the classroom can lead to feelings of frustration and disengagement, which can contribute to passive learning.

Furthermore, research by Van Deven, Snyder, and Combs (2018) found that students who are not fluent in English may have a more difficult time understanding complex academic concepts when they are presented in a second language. In this study, students who were not fluent in English reported feeling less confident in their ability to understand and apply complex concepts when the teacher spoke English. This suggests that the use of a second language in the classroom can lead to passive learning, as students may struggle to fully engage with the material.

This paper would like to investigate the possibility of the presence of fallacies within English as a Secondary Language (ESL) learning environment. The collective belief that English as a medium of instruction has an effect on student's learning is too broad. The themes that may be inferred from this paper may shed light in some of the nuances in the relationship between students and teacher within an English-centric pedagogy. The exploration of these fallacies based from the experiences of the students may showcase the observable or otherwise effect in their learning.

1.1 Statement of the Problem

Specifically, this paper would like to answer the following questions:

1. How can the participants describe their teaching-learning experience with English as the medium of instruction?

2. What were the difficulties faced by the participants in terms of understanding or comprehending lessons with English as the medium of instruction?
3. How can the participants explain their personal feelings during class when the teacher is fluent in English?

2. METHODOLOGY

A phenomenological study design in research is a qualitative research approach that aims to explore and understand the lived experiences of individuals or groups regarding a particular phenomenon. It seeks to delve deeply into the subjective perspectives, meanings, and interpretations that people attach to their experiences, rather than focusing on objective measurements or generalizability (Creswell, 2013).

In a phenomenological study, researchers typically conduct in-depth interviews, observations, or analyses of written or visual materials to uncover the essential qualities and structures of the phenomenon under investigation. These studies often result in rich, descriptive narratives that capture the essence of the participants' experiences.

3. RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis and interpretation of data gathered to answer the sub problem relative to the main problem of this study. This part discusses the findings of the study based on the research questions.

Table 1. Superordinate and Subordinate themes of The Lived Experiences of ESL Learners of different Tertiary Programs under English-Fluent Pedagogy

Superordinate	Subordinate
English as a Medium of Instruction	<ul style="list-style-type: none"> ● Tailoring Teaching Methods to Learning Styles ● Code Switching
Psychological Factors	<ul style="list-style-type: none"> ● Anxiety and Fear of Speaking ● Low Self-esteem due to Language Proficiency
Linguistic Barriers	<ul style="list-style-type: none"> ● Vocabulary Usage ● Grammar Rules ● Pronunciation Challenges

The data analysis manifests 5-higher ordered themes that describe the experiences of ESL Learners of different Tertiary Programs under English-Fluent Pedagogy at Laguna State Polytechnic University San Pablo City Campus. A table was created for visualizing the emerging superordinate and subordinate of the cases (see table 1) specifically, (1) English as a Medium of Instruction, (2) Psychological Factors, and (3) Linguistic Factors.

Theme 1 addresses the research question 1; How do you find your teaching-learning experience with English as the medium of instruction? Theme 2 answers the research question: Do you find difficulties understanding or comprehending lessons due to the medium of instruction? Theme 3 tackles the research question on how the participants feel during class when a teacher is fluent in English? Each theme is discussed in further detail below using a thematic map:

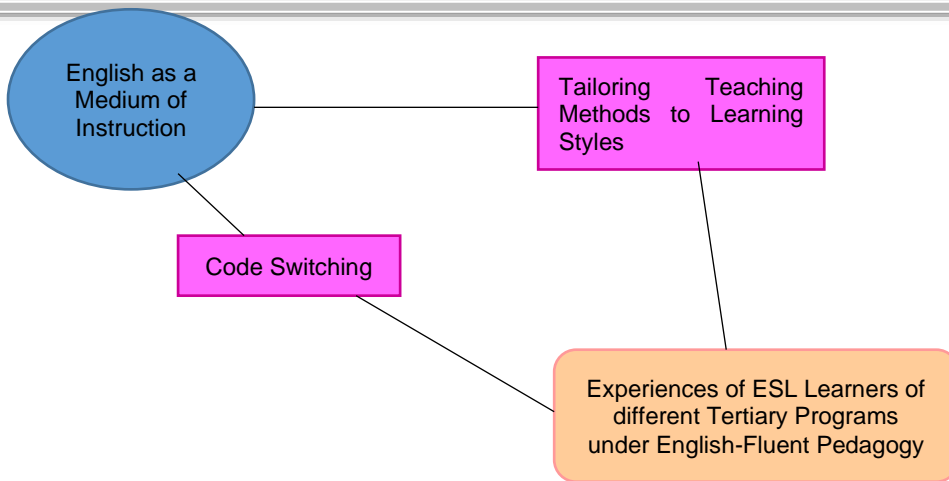


Figure 2. Thematic Map on English as a Medium of Instruction experienced by ESL Learners under English-Fluent Pedagogy

Theme 1. English as a Medium of Instruction. Participants viewed English as a difficult yet necessary medium of instruction for their chosen field of speculation. As English is considered a widely spoken language, it is imperative for the participants not to only learn it but also utilize it in discourse. The major sub themes for Theme 1 are Tailoring Teaching Methods to Learning Styles and Code Switching.

Tailoring Teaching Methods is viewed by the participant as a crucial part in understanding, immersing, and participating in an English centric pedagogy. The participants shared that a huge factor for them is how the teacher handles the class especially for those who do not use English or has little confidence in using the language

Code Switching refers to the practice of the participants of using two or more languages, or language varieties, in the course of a single conversation or interaction.

Table 2. Thematic breakdown of the teaching-learning experience of the participants with English as the medium of instruction.

Superordinate	Subordinate	Transcription
English as a Medium of Instruction	Tailoring Teaching Methods to Learning Styles	<p>Student A “. . . medyo nahahirapan po ako sa klase kasi minsan nakaka intimidatayung prof naming. Minsan may mga sinasabi siya na gets ko naman pero pag tinatanong na ako to share yung ideas ko, nablalangko ako. . .“</p>
		<p>Student B “I think malaking factor po yung teacher pagdating po sa pagkatuto ng students. Kasi, for example, ako po, gusto ko mag participate in class pero madalas po ay nahihya ako kasi naiisip ko baka mali sabihin ko baka mali yung grammar ko ganoon po. Tapos may mga instance din po na feeling ko tama naman sinasabi ng prof pero wala ako maintindihan. Pero hindi naman po kasalanan ng prof, feeling ko lang po kasi parang pag sasagot kami, syempre as college students na,dapat po ay tama yung sasabihin.”</p>
	Code Switching	<p>Student C “Personally po, madalas po talaga akong nag Tatagalog sa klase po kahit English po yung subject. Ewan ko po, mas madali kasi iexpress yung sarili ko sa Tagalog kesa sa English. Tsaka po minsan talagang hindi ko po alam yung sasabihin. Parang yung idea ko nasa Tagalog lang talaga.”</p>
		<p>Student D “. . . mas madali po talaga pag Tagalog. I experienced po kasi talaga na nablalank ako pag magsasalita na infront of the class. Tapos minsan po pag may question po yung teacher hindi ko po talaga maiwasan mag Tagalog.”</p>

Student E

“Siguro po, ano kadalasan po kasi sa campus naming even po na yung subject po namin ay is dapat English marami pong teachers sa amin or professors na gumagamit po talga sila ng TagLish minsan parang yan po ay Taglish para mas maintindihan po naming yung lesson po nila. So sa way na po yon parang doon po naming lalong maintinihan po naming yung mga lesson po naming sa kanila siguro po yun po yung sa English po naming”

“ . . . mas madalas po kaming magsalita ng . . . parang kapag nagtanong po sila ng English yung sagot po namin ay parang ayun po Tagalog, minsan TagLish . . siguro po sa panahon ngayon sa ngayon mas nakaka, natuto po talaga kami sa TagLish po, as a Filipino po tayo syempre mas naiintindihan po natin yung mga lesson through Tagalog po. Syempre po second language natin ang English, parang ayun po, nagsasama sila tapos doon po talaga natin natutunan yung lesson ”

Using the data obtained about the experience with English as the medium of instruction, participants view English as an important part of learning their specialization. However, it can also be noted how they see the language as both a bridge and a gap for them in truly immersing in the teaching-learning experience. Furthermore, teachers who uses the English language in the classroom tends to be a factor with the participants to fully engage themselves in learning. This is supported by the research of Johnson (2018) who states that being able to communicate in English allows people to work with colleagues, engage in discussion, and access a multitude

of English-language resources. In academic contexts, where scholarly publications and conferences primarily utilize English as the medium of communication, this characteristic of English as a bridge is especially important (Smith & Brown, 2020). On the contrary, the variety of English dialects and accents can be confusing and challenging to comprehend for ESL learners (Jones & Smith, 2021). Variations in vocabulary and pronunciation among English speakers from different regions make it difficult for learners to communicate in real life since they may have trouble recognizing accents, they are unfamiliar with.

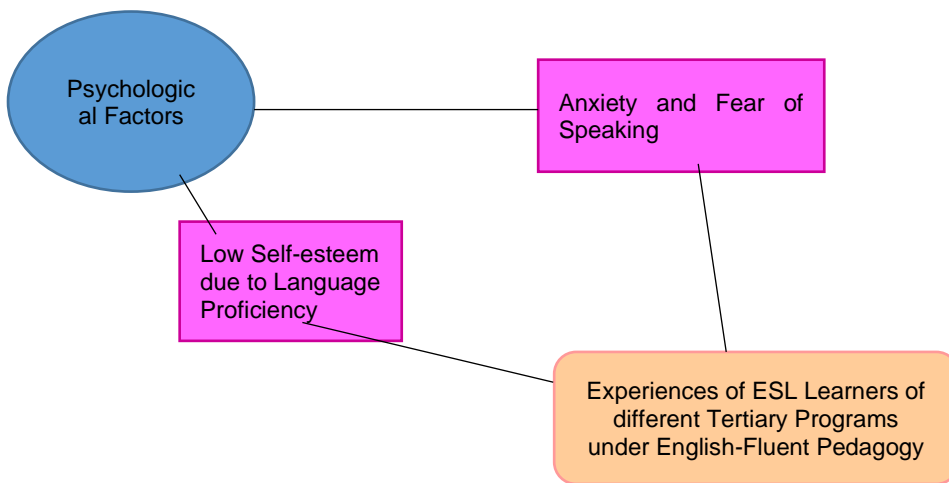


Figure 3. Thematic Map on Psychological Factors experienced by ESL Learners under English-Fluent Pedagogy

Theme 2. Psychological Factors. Nguyen, T. H., and Hernandez, M. (2022) talked about how learner motivation, self-efficacy beliefs, anxiety, and cultural background can profoundly influence ESL students' learning experiences and outcomes.

Low Self-esteem due to Language Proficiency resulted in reduced classroom participation, limited progress, and negative self-perception of the participants.

Anxiety and Fear of Speaking. The participants experience apprehension or dread of speaking in class which led to decreased engagement in classroom discourse

Table 3. Thematic breakdown of the difficulties faced by the participants in terms of understanding or comprehending lessons with English as the medium of instruction.

Superordinate	Subordinate	Transcription
Psychological Factors	Low Self-esteem due to Language Proficiency	<p>Student A</p> <p>“Umpisa palang naman po talaga ay kabado na po ako lalo na kapag English po yung teacher. Taspo yung mga magagaling mag English na teacher pa yung magtuturo. Nahihiya po talaga ako kasi hindi naman ako magaling mag English. Kaya madalas po talaga ay umiiwas po ako mag salita kasi nahihiya ako.”</p>

Student C

“Feeling ko po talaga pag hindi ka confident sa English mo parang ang hina hina mo sa klase. Kasi kahit anong aral ko ng topic minsan pag andyan na, wala, zero talaga. May mga times po talaga na kahit aral na aral ako, pag nasa classroom na tatameme po ako . . .”

Student B

“. . . nahihya po talaga ako magsalita. Kahit anong klase pong pagsasalita. Feeling ko po kasi pagtatawanan lang ako ng classmates ko. May experience po kasi ako na may nasabi ako na feeling ko naman tama pero may mali pala tapos yung iba kong classmate nakita ko po na tumatawa. Ever since po noon talagang iniwasan ko na po pag ganyan na need magsalita or mag share sa classroom. . .”

Anxiety and Fear of Speaking

Student E

“. . .siguro po kasi hindi po talaga ako confident sa pagsasalita ko po ng English since ayun nga po parang nahhirapan po talaga ako pero marunong po ako mag English pero hindi ko lang po siya ma express through ano po talaga through words.”

Based on their own accounts, the majority of participants report feeling insecure and self-conscious when speaking in English. This is linked to a combination of internal and external influences that eventually cause the pupils to become less engaged in class. These insecurities are sometimes observable but, in most account, they are not visible to an untrained eye. MacIntyre and Gardner (2016) corroborate this, stating that language anxiety is a common occurrence for ESL students and

can have an impact on their performance. Fear of making errors, worry about getting bad feedback, or nervousness about speaking in front of others can all contribute to this anxiety. Furthermore, speaking English with peers encourages language growth. Students can feel more at ease using their language abilities in a supportive learning environment when they have positive peer interactions.(Lantolf & Thorne, 2006).

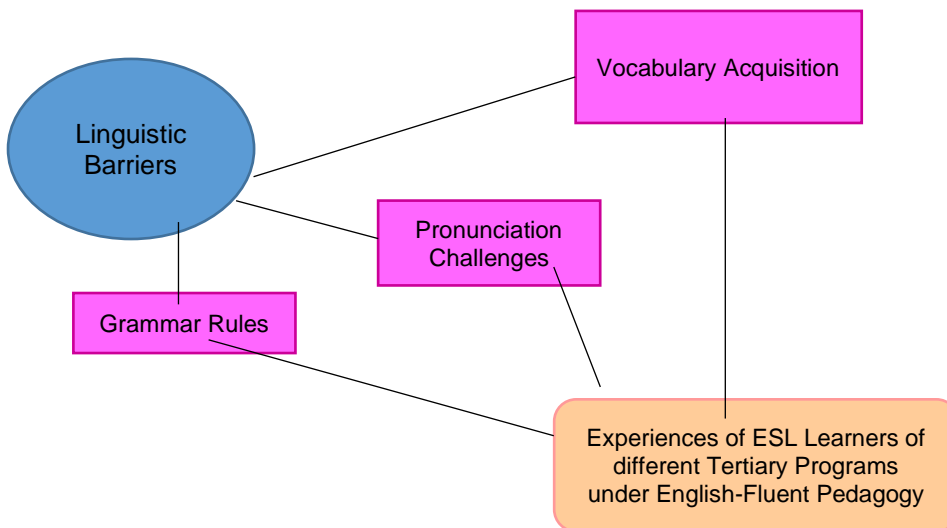


Figure 4. Thematic Map on Linguistic Barriers experienced by ESL Learners under English-Fluent Pedagogy

Figure 3 illustrates the (2) major themes extracted on Experiences of ESL Learners of different Tertiary Programs under English-Fluent Pedagogy. Sub Themes that emerged from "Linguistic Barriers" are (Vocabulary Usage, Grammar Rules, and Pronunciation Challenges)

Theme 3. Linguistic Barriers. Linguistic challenges have a significant impact on ESL learning in the classroom, including grammatical comprehension, vocabulary growth, pronunciation, and cultural awareness. (Chen, L., & Garcia, M., 2022).

Vocabulary Usage is the skill to utilize vocabulary to expound on thoughts and ideas. As per the participants, these vocabularies were acquired mostly during classroom engagements and discussion

Grammar Rules is the set rules within the class as per the standard of the English language. It was noted by the participants that this was a difficult aspect in forming their thoughts and ideas.



Pronunciation Challenges is probably one of the most common issues faced by students when talking about the English Language. The influence of a learner's native language (L1) can lead to pronunciation difficulties. L1 interference

occurs when sounds or patterns from the native language are carried over to English pronunciation.(Brown, 2007)

Table 4 Thematic breakdown of the participants' personal feeling during class when the teacher is fluent in English.

Superordinate	Subordinate	Transcription
Linguistic Barriers	Vocabulary Usage	<p>Student E <i>“ . . . so tapos po minsan din po nawalan din po ako ng interest nalang making since hindi ko din po naiintindihan masyado yung ibang words na sinasabi po nila. So para po sa akin ayun po yung na fefeel ko every time sobrang fluent po magsalit ng isang prof. . . .”</i></p>
	Grammar Rules	<p>Student C <i>“Konting words lang po kasi talaga alam ko sa English. Yung mga basic lang po talaga. Kaya hirap po ako magsalita kasi mas madami akong alam sa Tagalog kesa English”</i></p> <p>Student D <i>“ . . . nakakalito po ang grammar pag sa English. Pero ganon din naman po sa Filipino so parang same lang. Pero pag dating po kasi sa English parang ang hirap po tandaan yung mga rules. Minsan kung ano nalang nasa isip ko kahit hindi ko sure tama yung grammar sasabihin ko nalang po”</i></p>
	Pronunciation Challenges	<p>Student C <i>“May mga words po sa English na hindi ko alam paano sabihin kaya madalas po ay tinaTagalog ko nalang po. Ang complicated po kasi minsan ng words. Tapos minsan hindi ko alam yung word 740ay un, example po ay first time ko lang marinig. Tapos pag sa class naman po, pag nagkamali ka lang na salita, pagtatawanan ka.</i></p> <p><i>Even though college na po kami, meron at meron po talagang instance na parang nabubully ka kasi mali yung pronunciation mo . . . Kahit magtry ka po, yung genuine na gusto mo talagang mag salita in English, nahihiya nalang din po ako kasi worry ko baka mali yung pagkasabi ko doon sa word”</i></p>
		<p>Student A <i>“ . . . nakakahiya po kasi minsan, ano po kasi, baluktot minsan po yung English ko po. May mga salita ako na hindi masyado kayang sabihin. Pero kaya ko naman po sabihin, hindi ko lang po minsan talaga alam if tama yung pronunciation. Tapos madalas po since yung sa course nga po naming ay need din po alam ng basic English, nakaka kaba po kasi minsan talaga hindi ko alam yung word paano sabihin”</i></p>

The experience of the participants showcased how teachers can have a huge role in the learning process of the students. Specifically, if a teacher is well versed in the English language, students tend to have hesitation in participating in class. This illustrates the huge role a teacher plays in the overall learning experience of the students. As the authority within the classroom, students view their teachers as the sole source of information. Therefore, any and all knowledge shared by them, should, in theory be factual. However, students tend to be intimidated by the sheer presence of such authority within the

classroom as they view themselves as lower in terms of overall grasp of the English language. Linguistic barriers in the classroom can pose significant challenges for ESL students. However, the presence of English fluent teachers plays a vital role in mitigating these barriers. Such teachers contribute to clearer communication, effective instruction, and a supportive learning environment. (Nguyen, H., & Ryan, J., 2015). This is the ideal setting; however, it proves to be not the case in the context of the current study.

Thematic Data Result Framework

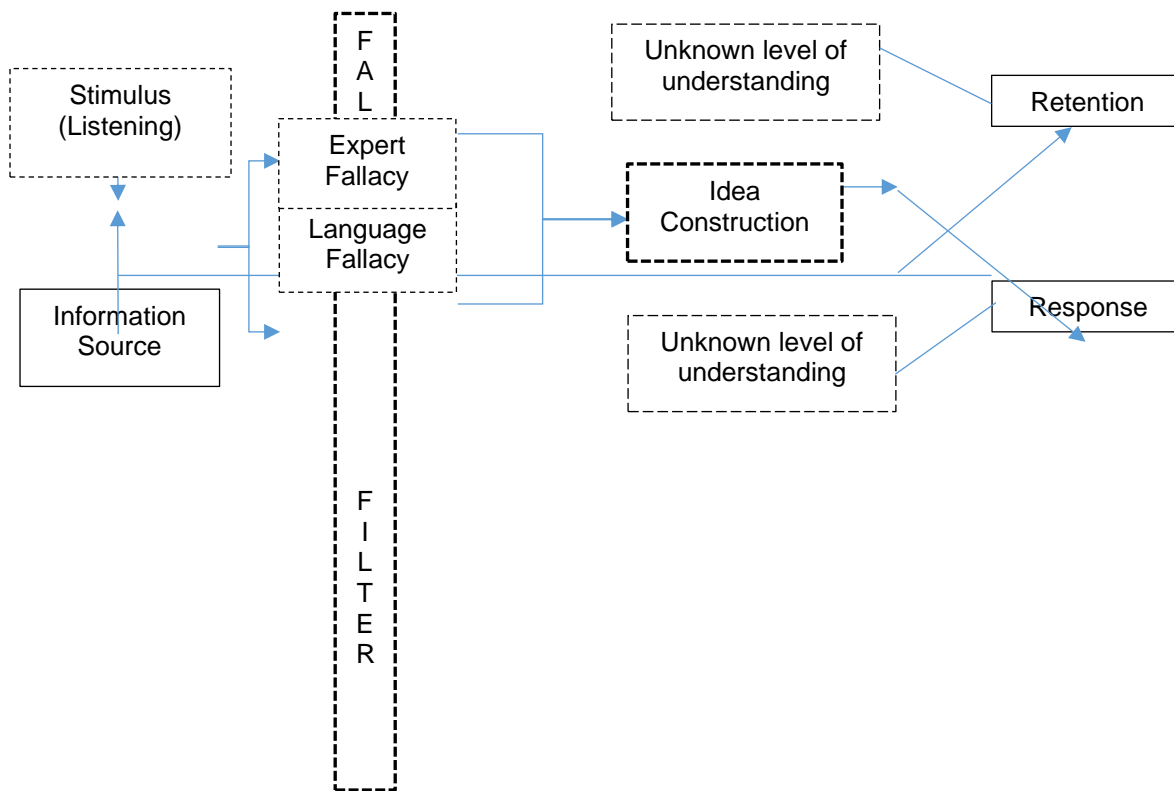


Figure 5. Thematic Data Results Framework of Expert and Language Fallacy

As the themes emerged from the data gathered, the researcher came up with a proposed framework to explain the Language and Expert Fallacy Phenomena as experienced by Tertiary Education Students. The figure illustrates the potential occurrence of Expert Fallacy and Language Fallacy in the classroom.

The broken lines illustrate the concepts that cannot be outwardly observed. These are instances where the phenomena occurring may differ depending on the individual. On the other hand, the solid lines show concepts that are easier to see. Such concepts may have an observable manifestation from an outside perspective. Lastly, the arrows demonstrate how the flow of exchange usually occurs within the classroom.

Students are often stimulated by an external force. These forces are the information source which may be in the form of their teacher or classmates depending on the circumstance. During this stimulation, students often listen to the messages delivered from the source. However, they do not immediately form thoughts and ideas to understand or react to the information source, rather, they go through the fallacy filter that could potentially interfere in the formation of their reasoning.

The fallacy filter is composed with two concepts – expert and language fallacy. These fallacies are independent from each other but may sometimes overlap. In context of the paper, there were nuances in the experiences of the participants with regards to these fallacies. Language fallacy took the form of challenges faced by the participants when they perceive their instructor as

fluent in the language. Consequently, Expert fallacy manifested when their instructor appears to have a grandiose façade. These aspects of the fallacy filter overlap with each other.

After passing through the filter, students are now tasked to form their ideas and/or opinions about the topic they heard. This phase is the idea construction. Students are now trying to simultaneously understand and comprehend the situation while creating their own thoughts. This part is where students need to decide whether their ideas should be shared as a response to the stimulus or it should be retained as background information.

The choice of the students to either respond or retain the information they have formed during the process is immeasurable. There are many factors to consider during this phase. Hence, there is an unknown level of understanding for the student at this level unless the teacher decides to assess them through different assessment tools like oral recitation or written tests. If students decide to share the information they have constructed, the teacher may be able to evaluate them. However, this may also be limited depending on many factors such as the clarity of thought, the presentation of information, the supporting details presented by the student, etc. On the other hand, teachers may opt to have a written assessment which gauges the stock knowledge of the student. Though, much like an oral presentation, this can still be nuanced depending on several factors such as type of test, time allotted, memory retention etc.

Overall, the figure is limited only to the observable teaching-



learning experience of the participants within the study. Other modalities, methodology, teaching techniques may impact the overall flow of information in the class. Although the fallacy filter was almost always present for each participant, this is not an indication that these are the only factors that may have an effect on students and their experiences.

4. CONCLUSION AND RECOMMENDATIONS

Based on the gathered data, it can be concluded that most of the participants unknowingly experience Language and Expert Fallacy.

The researcher found that the participants are heavily influenced with how the English language is utilized within the confines of the classroom. As presented with the data, the participants were not able to formulate their thoughts and ideas when presented with the English language as a medium for discourse.

It was also observed that the participants are cautious in engaging with their teachers as they are hesitant with their capabilities and competence in creating sound and comprehensive ideas and thoughts. This leads to their inactiveness in class which makes them passive learners.

Both of these phenomena can be attributed to the Language and Expert Fallacy. Wherein, a language fallacy is a filter that, via the use or absence thereof of contextualized English, produces misunderstandings or mistakes in reasoning. This misconception may impede students' learning and comprehension of language usage. The idea that the teacher alone, as the "expert," is the only one with knowledge and authority is also known as the expert fallacy. This misconception may hinder students' language learning and involvement by fostering an atmosphere in which students believe they must rely entirely on their teachers for knowledge and direction.

Based on the findings and conclusions, the following are recommended:

1. Teachers are encouraged to adopt more positive reinforcement as a Methodology. Constructive criticism and encouragement should be prioritized in the classroom. This is to lessen tension on the side of the students and actually enjoy learning and using the English language
2. Students and peers are urged to form supportive learning environment where communicating using the English language is encouraged. Also, there is room to establish student-led groups to practice speaking, reading, and writing in English outside of the classroom.
3. School Administrators may provide a curriculum that addresses concerns among students who do not specialize in the English language. After school workshops or clubs may be implemented to encourage students to be with their peers and create an environment where they can communicate and improve their language skills. Furthermore, the school administrators may conduct internal review among

teachers to assess the methodology they use in non-English specialization.

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PROACTIVE LEADERSHIP: INFLUENCE ON TEACHER'S WORK MOTIVATION AND PERFORMANCE

Joecel Mar B. Ambid

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study investigated the impact of proactive leadership on teachers' work motivation and performance, focusing on behaviors such as innovativeness, problem-solving, adaptability, continuous learning, and empowerment. Using a quantitative approach, the study involved 141 public school teachers in Victoria Sub-Office, School Division of Laguna, with a survey-questionnaire refined by experts.

This study looks into two aspects of work motivation among teachers i.e., intrinsic motivation and extrinsic motivation. Moreover, the study will assess these factors in relation to task performance, contextual performance, and adaptive performance. This study aims to provide significant insights for educational leaders, legislators, and administrators by examining the relationship between proactive leadership and teacher performance.

Statistical analysis revealed that teachers positively perceived their school heads' proactive leadership, indicating a culture that encourages innovation, problem-solving, adaptability, continuous learning, and empowerment. Teachers showed strong intrinsic motivation but slightly lower extrinsic motivation, driven by personal fulfillment and professional growth alongside job security and respect. Performance assessments indicated high task, contextual, and adaptive performance, reflecting teachers' competence and effectiveness. While proactive leadership overall significantly impacted motivation and performance, specific dimensions like adaptability negatively relate to motivation, and individual attributes do not significantly influence performance variance.

Proactive leadership significantly impacted teachers' work motivation and performance, rejecting the null hypothesis. While proactive leadership overall influenced these outcomes, specific dimensions showed varying effects. Adaptability negatively relates to motivation, and individual attributes like innovativeness and problem-solving did not significantly influence performance variance.

Teachers may engage with proactive leadership initiatives to enhance motivation and performance. School heads should prioritize proactive leadership strategies, focusing on adaptability and continuous learning. Future research should explore how specific proactive leadership dimensions influence teacher outcomes for further insights.

KEYWORDS: *impact; proactive leadership; teachers' work motivation*

1. INTRODUCTION

Proactive leadership can promote constructive change, overcome hurdles, and maximize opportunities in many contexts. Proactive leaders can forecast market trends, adapt to changing conditions, and promote innovation in business and organizations. These leaders boost their companies' long-term growth and competitiveness. Active leadership in healthcare protects patient safety and improves treatment by identifying and mitigating risks and improving operational processes. Proactive leaders may create a positive environment for student success and teacher satisfaction by implementing innovative policies and building strong support systems. In social and political spheres, proactive leadership can improve problem-solving, crisis management, and long-term societal goals. Proactive leadership drives growth and fosters adaptation in different disciplines, making it essential to successful leadership in the complex and ever-changing global world.

Failure to study proactive leadership research may lose opportunities to improve leadership and address significant issues in numerous disciplines. Organizations may struggle to adapt to quickly changing surroundings without a strong grasp of proactive leadership, which may limit competitiveness and growth stagnation. In schools, ignoring proactive leadership's impact on teacher performance may inhibit effective teaching and student success. Lack of extensive research in healthcare

and other vital sectors could expose people to unnecessary dangers and slow progress toward better outcomes. Not researching proactive leadership may hinder our ability to innovate, problem-solve, and grow in many fields, limiting our ability to traverse complicated and evolving difficulties.

The present study investigates the impact of proactive leadership styles on teachers' work motivation and performance in the educational setting. The importance of proactive leadership in improving organizational effectiveness and employee outcomes is becoming more widely acknowledged. Nevertheless, the influence of this factor on the effectiveness of educators has not been thoroughly investigated.

The objective of this study is to examine the effect of proactive leadership behaviors, namely innovativeness, problem solving abilities, adaptability, continuous learning, and empowerment on teachers' work motivation and performance. This study looks into

two aspects of work motivation among teachers i.e., intrinsic motivation and extrinsic motivation. Moreover, the study will assess these factors in relation to task performance, contextual performance, and adaptive performance. This study aims to provide significant insights for educational leaders, legislators, and administrators by examining the relationship between proactive leadership and teacher performance. The research



wants to throw light on how proactive leadership can contribute to creating an environment that is favorable to achieving optimal teaching and learning outcomes.

1.1 Statement of the Problem

Specifically, the study intends to address the following research questions.

1. What is the teacher’s assessment of their school heads’ proactive leadership as to:
 - 1.1 innovativeness,
 - 1.2 problem solving abilities,
 - 1.3 adaptability,
 - 1.4 continuous learning, and
 - 1.5 empowerment?
2. What is the level of teachers’ work motivation in terms of:
 - 2.1 intrinsic motivation; and
 - 2.2 extrinsic motivation?
3. What is the status of teacher's performance in terms of:
 - 3.1 task performance,
 - 3.2 contextual performance, and
 - 3.3 adaptive performance?
4. Does proactive leadership significantly affect teachers’ work motivation and performance?

2. METHODOLOGY

The present study employed a quantitative research approach to examine the correlation between proactive leadership and instructors' job motivation and performance. This choice was grounded in several considerations. Quantitative research allows for generalizations to broader groups (Babbie, 2021), aiming to collect data from a representative sample of teachers

in public schools located in Victoria, Laguna. Data was gathered through a survey-questionnaire employing a 4-point Likert scale, with the study seeking to extrapolate findings to predict consequences for larger teacher populations (Creswell, 2017).

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions will further characterize the level of school head’s proactive leadership and its influence on teacher’s work motivation and performance.

TEACHER’S ASSESSMENT OF THEIR SCHOOL HEADS’ PROACTIVE LEADERSHIP

Table 1 presents the Level of teacher’s assessment of their school heads’ proactive leadership as to innovativeness. In this table, the statement with the highest mean is "My school head supported the use of innovative teaching methods" with a mean of 3.92 and a standard deviation of 0.24, indicating a high level of agreement among the respondents.

Conversely, the statement with the lowest mean is "My school head encouraged us to think outside the box" with a mean of 3.78 and a standard deviation of 0.43, although still within the 'Strongly Agree' category, showing slightly lower agreement compared to other statements

The overall mean of the responses is calculated to be 3.85, with a standard deviation of 0.28, indicating that teachers perceive their school heads' proactive leadership towards innovativeness to a very great extent.

Table 1. Level of teacher’s assessment of their school heads’ proactive leadership as to innovativeness

STATEMENTS	MEAN	SD	REMARKS
<i>My school head encouraged innovative thinking and the implementation of new ideas.</i>	3.88	0.32	Strongly Agree
<i>My school head was open to new ideas and approaches.</i>	3.83	0.38	Strongly Agree
<i>My school head promoted a culture of creativity and innovation.</i>	3.83	0.38	Strongly Agree
<i>My school head supported the use of innovative teaching methods.</i>	3.92	0.24	Strongly Agree
<i>My school head encouraged us to think outside the box.</i>	3.78	0.43	Strongly Agree
Weighted Mean		3.85	
SD		0.28	
Verbal Interpretation		Very Great Extent	

It is evident that teachers generally perceive their school heads as supportive of innovation and creativity within the educational setting. The high means across all statements suggest a positive perception regarding the encouragement of new ideas, innovative thinking, and the promotion of a culture of creativity within the school environment. Although there is a slight variation in agreement levels among different statements, the overall perception remains highly positive.

It is consistent with research emphasizing the importance of leadership in fostering innovation within educational institutions. One study also has shown that supportive leadership plays a crucial role in creating an environment conducive to innovation and change (VanderPol, 2023).



Table 2. Level of teacher’s assessment of their school heads’ proactive leadership as to problem solving abilities

STATEMENTS	MEAN	SD	REMARKS
<i>My school head effectively addressed and resolved issues that arise.</i>	3.78	0.43	Strongly Agree
<i>My school head used logical and sound judgement in problem-solving.</i>	3.89	0.32	Strongly Agree
<i>My school head was able to identify problems quickly and find effective solutions.</i>	3.72	0.46	Strongly Agree
<i>My school head encouraged us to develop our own problem-solving skills.</i>	3.67	0.59	Strongly Agree
<i>My school head handled crises and problems calmly and effectively.</i>	3.56	0.51	Strongly Agree
Weighted Mean		3.72	
SD		0.34	
Verbal Interpretation		Very Great Extent	

Table 2 presents the level of teacher’s assessment of their school heads’ proactive leadership as to problem-solving abilities.

The statement with the highest mean is "My school head used logical and sound judgment in problem-solving" with a mean of 3.89 and a standard deviation of 0.32, indicating strong agreement among respondents. Conversely, the statement with the lowest mean is "My school head handled crises and problems calmly and effectively" with a mean of 3.56 and a standard deviation of 0.51, although still falling within the 'Strongly Agree' category, showing slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 3.72, with a standard deviation of 0.34, indicating that teachers perceive their school heads' proactive leadership in problem-solving abilities to a very great extent.

These results were indicative that teachers generally perceive their school heads as effective problem solvers who use logical judgment and can identify and resolve issues efficiently. However, there may be some areas for improvement, particularly in handling crises calmly and effectively, as indicated by the lower mean for that statement.

Table 3. Level of teacher’s assessment of their school heads’ proactive leadership as to adaptability

STATEMENTS	MEAN	SD	REMARKS
<i>My school head was able to adapt to changing circumstances.</i>	3.56	0.51	Strongly Agree
<i>My school head encouraged flexibility in our work.</i>	3.72	0.46	Strongly Agree
<i>My school head was open to change and new ideas.</i>	3.44	0.86	Strongly Agree
<i>My school head adjusted strategies based on new information or changes in the environment.</i>	3.33	0.91	Strongly Agree
<i>My school head promoted a culture of adaptability and flexibility.</i>	3.67	0.49	Strongly Agree
Weighted Mean		3.54	
SD		0.53	
Verbal Interpretation		Very Great Extent	

Table 3 presents the level of teacher’s assessment of their school heads’ proactive leadership as to adaptability.

Among the statements in Table 3, the one with the highest mean is "My school head encouraged flexibility in our work" with a mean of 3.72 and a standard deviation of 0.46, indicating strong agreement among respondents. Conversely, the statement with the lowest mean is "My school head adjusted strategies based on new information or changes in the environment" with a mean of 3.33 and a standard deviation of 0.91, although still within the 'Strongly Agree' category, it shows slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 3.54, with a standard deviation of 0.53, indicating that teachers perceive

their school heads' proactive leadership in adaptability to a very great extent.

These imply that teachers generally perceive their school heads as encouraging flexibility and adaptability in their work environment. However, there may be some room for improvement in terms of adjusting strategies based on new information or changes in the environment, as indicated by the lower mean for that statement.

The results of this study underscore the significance of proactive leadership in promoting adaptability and flexibility within the public schools.



Table 4. Level of teacher’s assessment of their school heads’ proactive leadership as to continuous learning

STATEMENTS	MEAN	SD	REMARKS
<i>My school head promoted continuous learning and professional development.</i>	3.89	0.32	Strongly Agree
<i>My school head encouraged us to update our knowledge and skills regularly.</i>	3.78	0.73	Strongly Agree
<i>My school head provided opportunities for us to learn and grow.</i>	3.94	0.24	Strongly Agree
<i>My school head valued and supported ongoing education and training.</i>	3.89	0.47	Strongly Agree
<i>My school head encouraged us to learn from our mistakes.</i>	3.78	0.55	Strongly Agree
Weighted Mean		3.86	
SD		0.43	
Verbal Interpretation		Very Great Extent	

Table 4 presents the level of teacher’s assessment of their school heads’ proactive leadership as to continuous learning. The statement with the highest mean in Table 4 is "My school head provided opportunities for us to learn and grow" with a mean of 3.94 and a standard deviation of 0.24, indicating strong agreement among respondents. Conversely, the statement with the lowest mean is "My school head encouraged us to update our knowledge and skills regularly" with a mean of 3.78 and a standard deviation of 0.73, although still within the 'Strongly Agree' category, showing slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 3.86, with a standard deviation of 0.43, indicating that teachers perceive their school heads' proactive leadership in continuous learning to a very great extent.

Teachers showed that they generally perceive their school heads as supportive of continuous learning and professional development. The high means across most statements suggest a positive perception regarding the promotion of ongoing education, learning from mistakes, and providing opportunities for growth within the school environment. However, there may be some areas for improvement, particularly in encouraging regular updates of knowledge and skills.

Table 5. Level of teacher’s assessment of their school heads’ proactive leadership as to empowerment

STATEMENTS	MEAN	SD	REMARKS
<i>My school head empowered us to make decisions and take action.</i>	3.90	0.00	Strongly Agree
<i>My school head encouraged us to take on leadership roles.</i>	3.83	0.38	Strongly Agree
<i>My school head gave us the autonomy to perform our tasks.</i>	3.61	0.50	Strongly Agree
<i>My school head supported us in developing our skills and abilities.</i>	3.67	0.49	Strongly Agree
<i>My school head trusted us to make good decisions.</i>	3.89	0.32	Strongly Agree
Weighted Mean		3.78	
SD		0.27	
Verbal Interpretation		Very Great Extent	

Table 5 highlights the level of teacher’s assessment of their school heads’ proactive leadership as to empowerment. The statement with the highest mean is "My school head empowered us to make decisions and take action" with a mean of 3.90 and a standard deviation of 0.00, indicating unanimous agreement among respondents. Conversely, the statement with the lowest mean is "My school head gave us the autonomy to perform our tasks" with a mean of 3.61 and a standard deviation of 0.50, although still within the 'Strongly Agree' category, showing slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 3.78, with a standard deviation of 0.27, indicating that teachers perceive their school heads' proactive leadership in empowerment to a very great extent.

These imply that teachers overwhelmingly perceive their school heads as empowering them to make decisions, take on leadership roles, and trusted them to make good decisions. However, there may be some areas for improvement in providing autonomy to perform tasks, as indicated by the lower mean for that statement.

Table 6. Composite table of teacher’s assessment of their school heads’ proactive leadership

INDICATORS	WM	SD	V.I.
<i>innovativeness</i>	3.85	0.28	Very Great Extent
<i>problem solving abilities</i>	3.72	0.34	Very Great Extent
<i>adaptability</i>	3.54	0.53	Very Great Extent
<i>continuous learning</i>	3.86	0.43	Very Great Extent
<i>empowerment</i>	3.78	0.27	Very Great Extent



Overall Mean	3.75
SD	0.40
Verbal Interpretation	Very Great Extent

Table 6 verifies the composite table of teacher's assessment of their school heads' proactive leadership. From the indicators, "continuous learning" yielded the highest weighted mean score ($M=3.86, SD=0.43$) and was interpreted to a very great extent. This is followed by "innovativeness" with a weighted mean score ($M=3.85, SD=0.28$) and was also interpreted to a very great extent. On the other hand, the indicator "adaptability" received the lowest weighted mean score of responses with ($M=3.54, SD=0.53$) yet was also interpreted to a very great extent.

The level of teacher's assessment of their school heads' proactive leadership attained an overall mean score of 3.75 and a standard deviation of 0.40 and was interpreted to a very great extent among the respondents.

Results suggest that teachers highly value school heads who demonstrate a commitment to ongoing learning and who foster an environment of innovation within the educational institution. These findings underscore the importance of professional development and forward-thinking approaches in effective school leadership. However, it is noteworthy that the indicator of "adaptability" received a comparatively lower weighted mean score, despite still being interpreted to a very great extent. This suggests that while adaptability is acknowledged, there may be room for improvement in this aspect of leadership. Overall, the assessment of teachers regarding their school heads' proactive leadership yielded a commendable overall mean score of 3.75, indicating a generally positive perception among respondents.

Table 7. Level of teachers' work motivation in terms of intrinsic motivation

STATEMENTS	MEAN	SD	REMARKS
As a teacher I try to work at the peak of my abilities.	3.11	0.72	Agree
Teaching boosts my self-esteem as of a person.	2.96	0.72	Agree
I see students' success as the main stimulus of my job.	2.89	0.75	Agree
I have opportunities for professional development.	3.06	0.75	Agree
Teaching boosts my self-efficacy as of a professional.	2.92	0.87	Agree
Weighted Mean		2.99	
SD		0.39	
Verbal Interpretation		Great Extent	

Table 7 presents the level of teachers' work motivation in terms of intrinsic motivation.

Examining the statements, the one with the highest mean is "As a teacher, I try to work at the peak of my abilities" with a mean of 3.11 and a standard deviation of 0.72, indicating agreement among respondents. Conversely, the statement with the lowest mean is "I see students' success as the main stimulus of my job" with a mean of 2.89 and a standard deviation of 0.75, although still within the 'Agree' category, showing slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 2.99, with a standard deviation of 0.39, indicating that teachers perceive their intrinsic motivation towards work to a great extent. It was evident that teachers generally feel motivated to work at the peak of their abilities and perceive teaching as boosting their self-esteem and self-efficacy. However, there may be some areas where motivation could be strengthened, particularly in viewing students' success as the main stimulus of their job.

Table 8. Level of teachers' work motivation in terms of extrinsic motivation

STATEMENTS	MEAN	SD	REMARKS
This job is necessary for my survival.	3.21	0.74	Agree
I am afraid to be criticized and regarded as a bad teacher.	3.06	0.81	Agree
I feel secure in this job.	3.22	0.72	Agree
I am adequately treated / respected by administration / supervisors.	3.30	0.75	Strongly Agree
I have adequate salary / wages.	3.13	0.75	Agree
Weighted Mean		3.18	
SD		0.40	
Verbal Interpretation		Great Extent	

Table 8 presents the level of teachers' work motivation in terms of extrinsic motivation.

Among the statements in Table 8, the one with the highest mean is "I am adequately treated/respected by administration/supervisors" with a mean of 3.30 and a standard deviation of 0.75, indicating strong agreement among respondents.

Conversely, the statement with the lowest mean is "I am afraid to be criticized and regarded as a bad teacher" with a mean of 3.06 and a standard deviation of 0.81, although still within the 'Agree' category, showing slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 3.18, with a standard deviation of 0.40, indicating that teachers perceive



their extrinsic motivation towards work to a great extent.

Results imply that teachers generally feel motivated by factors

external to the job itself, such as feeling secure in their job and being adequately treated by administration/supervisors.

Table 9. Composite table of teachers' work motivation

INDICATORS	WM	SD	V. I.
<i>Intrinsic Motivation</i>	2.99	0.39	Great Extent
<i>Extrinsic Motivation</i>	3.18	0.40	Great Extent
Overall Mean		3.09	
SD		0.39	
Verbal Interpretation			Great Extent

Table 9 presents an overview of teachers' work motivation, assessing both intrinsic and extrinsic motivational factors. The weighted mean (WM) scores indicate that teachers reported a slightly higher level of extrinsic motivation (WM = 3.18, SD = 0.40) compared to intrinsic motivation (WM = 2.99, SD = 0.39), with both aspects interpreted to a great extent by the respondents.

This suggests that while teachers are generally motivated by both internal and external factors, they may place slightly more emphasis on external rewards or incentives in their work.

The overall mean score for work motivation, combining intrinsic and extrinsic factors, was 3.09 with a standard deviation of 0.39, indicating that teachers are motivated to a great extent overall.

This indicates a positive outlook on work motivation among the respondents, highlighting the importance of recognizing and supporting both intrinsic and extrinsic motivators to maintain and enhance teacher engagement and satisfaction in their roles.

Table 10. Status of teacher's performance in terms of task performance

STATEMENTS	MEAN	SD	REMARKS
<i>I was able to complete my tasks effectively and efficiently.</i>	3.89	0.32	Strongly Agree
<i>I was able to meet or exceed my performance goals.</i>	3.94	0.24	Strongly Agree
<i>I was able to handle multiple tasks at the same time.</i>	2.94	0.24	Agree
<i>I was able to prioritize my tasks effectively.</i>	2.67	0.49	Agree
<i>I was able to perform my tasks without needing much guidance or supervision.</i>	3.94	0.24	Strongly Agree
Weighted Mean		3.48	
SD		0.21	
Verbal Interpretation			Very Great Extent

Table 10 presents the Status of teacher's performance in terms of task performance.

Among the statements, the two statements with the highest mean are "I was able to meet or exceed my performance goals" and "I was able to perform my tasks without needing much guidance or supervision," both with a mean of 3.94 and a standard deviation of 0.24, indicating strong agreement among respondents. Conversely, the statement with the lowest mean is "I was able to prioritize my tasks effectively" with a mean of 2.67 and a standard deviation of 0.49, falling within the 'Agree' category, but showing lower agreement compared to other

statements.

The overall mean of the responses is calculated to be 3.48, with a standard deviation of 0.21, indicating that teachers perceive their task performance to a very great extent. These results show that teachers generally feel confident in completing their tasks effectively and efficiently, meeting or exceeding performance goals, and performing tasks without much guidance or supervision. However, there may be some challenges in effectively prioritizing tasks, as indicated by the lower mean for that statement.

Table 11. Status of teacher's performance in terms of contextual performance

STATEMENTS	MEAN	SD	REMARKS
<i>I was able to contribute positively to the school's environment.</i>	3.83	0.38	Strongly Agree
<i>I was able to work well with my colleagues.</i>	3.78	0.43	Strongly Agree
<i>I was able to adapt to the school's culture and values.</i>	3.78	0.43	Strongly Agree
<i>I was able to handle changes in the school's environment.</i>	3.67	0.49	Strongly Agree
<i>I was able to support and help my colleagues when needed.</i>	3.39	0.70	Strongly Agree
Weighted Mean		3.69	
SD		0.40	
Verbal Interpretation			Very Great Extent



Table 11 describes the status of teacher's performance in terms of contextual performance.

Among the statements, the statement with the highest mean is "I was able to contribute positively to the school's environment" with a mean of 3.83 and a standard deviation of 0.38, indicating strong agreement among respondents. Additionally, the statements "I was able to work well with my colleagues" and "I was able to adapt to the school's culture and values" both have a mean of 3.78, falling within the 'Strongly Agree' category, showing consistent agreement among respondents.

Conversely, the statement with the lowest mean is "I was able to support and help my colleagues when needed" with a mean of 3.39 and a standard deviation of 0.70, although still within the 'Strongly Agree' category, showing slightly lower agreement compared to other statements.

The overall mean of the responses is calculated to be 3.69, with a standard deviation of 0.40, indicating that teachers perceive their contextual performance to a very great extent.

These results imply that teachers generally feel they contribute positively to the school environment, work well with colleagues, and adapt to the school's culture and values. However, there may be some areas for improvement in terms of supporting and helping colleagues when needed, as indicated by the lower mean for that statement.

The results of the present study emphasize the significance of continuous support and collaboration among teachers to enhance contextual performance and overall effectiveness in their roles.

Table 12. Status of teacher's performance in terms of adaptive performance

STATEMENTS	MEAN	SD	REMARKS
<i>I was able to adapt to changes in my job role and responsibilities.</i>	3.83	0.38	Strongly Agree
<i>I was able to learn new skills and knowledge when needed.</i>	3.83	0.38	Strongly Agree
<i>I was able to handle unexpected situations effectively.</i>	3.72	0.46	Strongly Agree
<i>I was able to adjust my work strategies based on feedback.</i>	3.89	0.32	Strongly Agree
<i>I was able to adapt to new technologies and tools.</i>	3.83	0.38	Strongly Agree
Weighted Mean		3.82	
SD		0.33	
Verbal Interpretation			Very Great Extent

Table 12 presents the status of teacher's performance in terms of adaptive performance.

It was observed that all statements have high means, with the lowest being 3.72 for "I was able to handle unexpected situations effectively," and the highest being 3.89 for "I was able to adjust my work strategies based on feedback." These means indicate strong agreement among respondents. The overall mean of the responses is calculated to be 3.82, with a standard deviation of 0.33, indicating that teachers perceive their adaptive performance to a very great extent.

It is evident that teachers generally feel they are adept at adapting to changes in their job roles and responsibilities, learning new skills when needed, handling unexpected situations effectively, and adjusting their work strategies based on feedback. This high level of adaptive performance suggests that teachers are flexible and responsive to the evolving demands of their profession. The results emphasize the importance of adaptive performance in the teaching profession.

Table 13. Composite table of teacher's performance

INDICATORS	WM	SD	V. I.
<i>Task Performance</i>	3.48	0.21	Very Great Extent
<i>Contextual Performance</i>	3.69	0.40	Very Great Extent
<i>Adaptive Performance</i>	3.82	0.33	Very Great Extent
Overall Mean		3.66	
SD		0.30	
Verbal Interpretation			Very Great Extent

Table 13 presents a comprehensive assessment of teacher performance across various indicators: task performance, contextual performance, and adaptive performance. The weighted mean (WM) scores indicate that teachers demonstrated high levels of performance across all categories, with each indicator interpreted to a very great extent by the respondents.

Task performance, which refers to the fulfillment of job-related duties and responsibilities, received a WM score of 3.48 with a standard deviation (SD) of 0.21. Contextual performance,

involving behaviors that contribute to the overall organizational effectiveness and climate beyond formal job requirements, scored slightly higher with a WM of 3.69 and SD of 0.40. Adaptive performance, reflecting the ability to adjust and thrive in various work situations and environments, received the highest WM score of 3.82, with an SD of 0.33. This indicates that teachers demonstrated exceptional adaptability and flexibility in their roles. The overall mean score for teacher performance was 3.66, with a standard deviation of 0.30, indicating a consistently high level of performance across the assessed indicators. This suggests that teachers are performing



their duties to a very great extent, excelling not only in their core responsibilities but also in their ability to adapt and contribute to the broader organizational goals and effectiveness. Such high-performance levels bode well for the overall success

and effectiveness of the educational institution, highlighting the dedication and competence of the teaching staff.

Table 14. Regression Analysis of proactive leadership to teachers' work motivation and performance

teachers' work motivation	B	SE	β	t	p
Constant	4.116	.588		6.996*	.000
<i>Innovativeness</i>		.105	.012	.11	.913
<i>problem solving abilities</i>		.098	.11	1.126	.262
<i>Adaptability</i>		.062	-.034	-.544	.587
<i>continuous learning</i>		.074	-.082	-1.109	.27
<i>Empowerment</i>					
R-squared			.201		
Adjusted R-squared			-.009		
Standard Error of the Estimate		.317			
F(5, 135)				3.69	.045
teacher's performance	B	SE	β	t	p
Constant	3.154	.831		3.797*	.000
<i>Innovativeness</i>		.156	.103	.664	.508
<i>problem solving abilities</i>		.085	-.094	-1.105	.271
<i>Adaptability</i>		.098	.137	1.4	.164
<i>continuous learning</i>		.125	.055	0.44	.661
<i>Empowerment</i>					
R-squared			.209		
Adjusted R-squared			.000		
Standard Error of the Estimate		.315			
F(5, 135)				4.011	.004

*p < 0.05

The table presents the results of a multiple regression analysis examining the effect of proactive leadership to teachers' work motivation and performance. The innovativeness, problem solving abilities, adaptability, continuous learning and empowerment of proactive leadership have significant effect to teachers' work motivation and performance. The F-test of the overall model is significant (F(5, 135) with, p < 0.05), indicating that the regression model is a good fit for the data.

From the findings above, we can infer that at 0.05 level of significance, the null hypothesis "*Is there a significant effect of proactive leadership to teachers' work motivation and performance*" rejected. Thus, the alternative should be accepted which incites that there is a significant affect between them.

The results indicate that proactive leadership has a significant impact on teachers' work motivation and performance, as evidenced by the statistically significant regression coefficients for both models (p < 0.05). However, when examining the specific predictors within each model, it appears that not all aspects of proactive leadership have equally significant effects. For teachers' work motivation, only adaptability shows a statistically significant negative relationship ($\beta = -0.544$, p = .587), suggesting that higher levels of adaptability in school heads might slightly decrease teachers' motivation. Conversely, for teachers' performance, none of the individual predictors reach statistical significance (p > 0.05), indicating that while proactive leadership overall has a significant impact on performance, the specific attributes of innovativeness, problem-solving abilities, adaptability, and continuous learning do not individually contribute significantly to the variance in

teacher performance.

These findings suggest that while proactive leadership plays a crucial role in influencing both teachers' work motivation and performance, the specific dimensions of proactive leadership that contribute most significantly to these outcomes may vary.

4. CONCLUSION AND RECOMMENDATIONS

Based on the results of the study, the researcher concluded that though regression analysis, the results indicate a significant overall impact of proactive leadership on both teachers' work motivation and performance, thus rejecting the null hypothesis. However, while proactive leadership as a whole significantly influences these outcomes, the specific dimensions of proactive leadership show varying effects. Adaptability demonstrates a statistically significant negative relationship with teachers' work motivation, suggesting that higher levels of adaptability in school heads might slightly decrease motivation. Conversely, none of the individual predictors reach statistical significance for teachers' performance, implying that while proactive leadership overall influences performance, the specific attributes such as innovativeness, problem-solving abilities, adaptability, and continuous learning do not individually contribute significantly to teacher performance variance.

Considering the findings and conclusion of the study, the researcher recommends the following.

1. Teachers may actively engage with and support proactive leadership initiatives within their schools, seeking opportunities for professional development and



collaboration to enhance their own work motivation and performance.

2. School heads are encouraged to prioritize the development and implementation of proactive leadership strategies, emphasizing adaptability and continuous learning, to positively impact teachers' work motivation and performance.
3. Future researchers may conduct further studies to explore the mechanisms through which specific dimensions of proactive leadership influence teacher outcomes, providing additional insights for enhancing educational leadership practices.

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SCIENCE PROCESS SKILLS ON LEARNER'S METACOGNITION AND PERFORMANCE IN SCIENCE 10

Kevin Abustan Quevedo

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study aims to determine the significant relationship of Science Process Skills to Learners' Metacognition and Performance in Science 10 students of Doña Pilar M. Alberto Integrated High School. It aimed to answer the questions such as the status of utilizing learner's science process skills, the level of the metacognition, the level of learner's performance, the significant relationship between science process skills to learner's metacognitions, and the significant effect of science process skills to the learner's performance in written and practical test.

Throughout the study, the researcher employed purposive sampling involving eighty (80) student respondents from three sections in Grade 10 of Doña Pilar M. Alberto Integrated High School with survey-questionnaire, written test and practical test as research instruments. Furthermore, the Mean and Standard Deviation were identified to analyze the gathered data while Pearson r correlation and multiple regression analysis were treated for their significant relationships.

From the study's data analysis, these findings were derived. It was found that the learners over all status of utilizing science process skills obtain very great extent. Data also showed learners' level of learner's metacognition obtain very great extent. Also, the research data showed that the level of learner's performance in terms of written test and practical test obtain very satisfactory. Moreover, the data showed science process skills were observed to have a significant relationship to the learner's metacognition. The result data also showed that science process skills have no significant effect on the learner's performance.

The following conclusion were drawn from the results of the study. Utilizing science process skills was observed to have a significant relationship to the learner's metacognition. Thus, signifies the rejection of null hypothesis as science process skills include intellectual skills, associated psychomotor and affective skills that are concerned with the learning of science in all its aspects. Meanwhile, the effect of utilizing science process skills on the learner's performance have no significant effect to the learner's performance. Thus, signifies the acceptance of null hypothesis.

It is recommended that the teachers can create educational opportunities that encourage inquiry-based learning, allowing students to participate actively in the scientific method. Motivate students to do experiments, gather information, evaluate it, and make decisions. Finally, Motivating the students to check their own learning with self-assessment exercises. Give students specific standards for achievement and give them guidance when assessing their own work in relation to these standards.

KEYWORDS: Science Process Skills; Learners' Metacognition; Performance

1. INTRODUCTION

Science Process Skills (SPS) at its core encompasses the ability to make accurate and meaningful observations, utilizing all the senses and scientific instruments available. Through careful observation, researchers identify patterns, detect anomalies, and formulate questions that serve as the foundation for further investigation.

Moreover, SPS emphasizes the importance of precise measurement and data collection, ensuring the reliability and validity of experimental outcomes. As far as level of student learning is concern, specifically in Science subject, getting involve into research as one of the process skills to be developed among students is indeed significant. In this manner, students can already show potential in doing research and learning the benefits of it.

This perception has driven the researcher to study the level of students' Science Process Skills to further enhance their potentials in learning and excel both in written and practical test. Furthermore, on students mastering these process skills will help them use and develop the kind of science program that

mirrors real science. A proposal classified SPS under two main categories – namely the basic SPS and integrated SPS – whereas the development of the former is to be considered as the necessary building block for the development of the latter. Having mastered the required skills for students will enable them to acquire knowledge and skills necessary for them to excel in the field.

According to Roa, G., et.al. (2022), it is knowing what to teach and how to learn were considered as two aspects of teaching and learning. More than just transferring knowledge, teaching, and learning about science also helps students become better problem solvers (Dauda et al., 2019).

Science process skills and metacognition are closely intertwined in the context of scientific inquiry. Developing metacognitive awareness can enhance students' use of science process skills, while proficiency in science process skills can, in turn, support the development of metacognitive abilities. Effective science instruction should aim to foster both science process skills and metacognition to promote deep understanding and proficiency in scientific thinking and inquiry. The importance of the science process skills not only



to meet the demands of learning science but also to the student's awareness of the importance of science in other subjects and human life. Therefore, the researcher believed that understanding the concept of science process skills and laboratory skills can help the student to improve their learning processes in science.

1.1 Statement of the Problem

Specifically, the study sought to achieve the following objectives:

1. What is the status of utilizing science process skills in terms of
 - 1.1. Statement of Problem;
 - 1.2. Observation;
 - 1.3. Hypothesis formulation;
 - 1.4. Experimentation; and
 - 1.5. Drawing conclusion?
2. What is the level of learner's metacognition in terms of
 - 2.1. Self-efficacy;
 - 2.2. Self-learning;
 - 2.3. Task Completion;
 - 2.4. Quality of Work; and
 - 2.5. Monitoring and Control?
3. What is the level of learner's performance in in terms of
 - 3.1. Written Test and
 - 3.2. Practical Test?
4. Is there a significant relationship between the status of utilizing science process skills and learner's metacognition?
5. Is there a significant effect on the status of utilizing science process skills on the learner's performance?

2. METHODOLOGY

The research design used in this study was a mixed method to determine the relationship between Science Process Skills to

Learner's Metacognition and Performance of Grade 10 Students in Science 10. Descriptive research is a research design in which data is collected in a qualitative manner and analyzed using quantitative procedures according to Nassaji (2015).

Descriptive research refers to the scientific methodology in which observation of the sampled population is carried out in its natural surroundings. This methodology intended to find 'what' is related to a phenomenon and data are collected qualitatively and analyzed through a quantitative method. Data is collected through methods like surveys, interviews, correlation study, observation study, or content analysis. Moreover, the observer does not intervene in this observation process or influence any of the variables of the study.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions will further characterize the status of utilizing science process skills among students as well as their level of metacognition and performance both in written and practical test in Science 10.

Status of Utilizing Science Process Skills

In this study, the status of utilizing process skills teaching refer to the skills of the students which include statement of the problem, observation, hypothesis formulation, experimentation, and drawing conclusion. The status of utilizing science process skills was revealed in the following table, showing the statement, mean, standard deviation, and verbal interpretation.

Table 1 shows the status of utilizing science process skills in stating the problem observed.

Table 1 Status of Utilizing Science Process Skills in Terms of Statement of Problem

STATEMENTS	MEAN	SD	REMARKS
I ensure that the topic I aim to examine has a sufficient amount of relevant data.	4.38	0.51	Strongly Agree
I rely on reputable evidence and data and disregarding information that I can't verify.	4.36	0.48	Strongly Agree
I focus and make emphasis on the main problem encounter.	4.24	0.46	Strongly Agree
I develop a concise and clear problem statement that articulates the questions and inquiry.	4.39	0.49	Strongly Agree
I continuously iterate and refine the problem statement based on feedback and new insights.	4.45	0.55	Strongly Agree
Weighted Mean	4.36		
SD	0.44		
Verbal Interpretation	Very Great Extent		

Table 1 illustrates the status of utilizing Science process skills in terms of Statement of Problem. The learners' status of utilizing science process skills in terms of stating the problem obtain very great extent (M=4.36, SD=0.44). This indicates that learners based their problem statement from the data and observation they gathered from their surroundings and feedbacks.

The data shows that the respondents strongly agree (M=4.45, SD=0.55) that students continuously iterate and refine the problem statement based on feedback and new insights. This entails that learners put emphasis on the inquiry that is significant on their experiences perceived from the surroundings.



Often, the statement of the problem will also serve as the basis for the introductory section of your final proposal, directing your reader's attention quickly to the issues that your proposed project will address and providing the reader with a concise

statement of the proposed project itself. Table 2 shows the status of utilizing science process skills in terms of observation process.

Table 2 Status of Utilizing Science Process Skills in Terms of Statement of Observation

STATEMENTS	MEAN	SD	REMARKS
I pay close attention to fine details when observing objects or scenes.	4.35	0.51	Strongly Agree
I can able to perceive subtle changes in my environment	4.65	0.48	Strongly Agree
I can able to recognize patterns or trends based on my observations.	4.70	0.51	Strongly Agree
I can differentiate between relevant and irrelevant details when observing a situation.	4.45	0.50	Strongly Agree
I effectively communicate my observations to others.	4.24	0.43	Strongly Agree
Weighted Mean	4.48		
SD	0.38		
Verbal Interpretation	Very Great Extent		

Table 2 shows the status of utilizing Science process skills in terms of Observation.

The learners' status of utilizing science process skills in terms of observation obtain very great extent ($M=4.48$, $SD=0.38$). This indicates that learners observation from the environment plays a crucial roles in their science process skills. The data shows that the respondents strongly agree ($M=4.70$, $SD=0.51$) that students able to perceive subtle changes in my environment. This entails that the environment is one of the main factors contributing with the learners science process skills.

Observing is a habit that many people have. It aids us in making decisions such as whether it is safe to cross the street. However, observation goes beyond mere noticing. We become aware of something through our senses, which is perception. It also entails acknowledging the significance of what we are witnessing.

Table 3 shows the status of utilizing science process skills in terms of formulating hypothesis

Table 3 Status of Utilizing Science Process Skills in Terms of Hypothesis Formulation

STATEMENTS	MEAN	SD	REMARKS
I begin with a research question that I want to answer.	4.59	0.54	Strongly Agree
I look for theories and previous studies to help me form educated assumptions about what the research will find.	4.33	0.47	Strongly Agree
I make sure my hypothesis is specific and testable.	4.40	0.52	Strongly Agree
I make sure that first part of the sentence states the independent variable and the second part states the dependent variable.	4.18	0.38	Agree
I collect some background information about the topic.	4.36	0.48	Strongly Agree
Weighted Mean	4.37		
SD	0.41		
Verbal Interpretation	Very Great Extent		

Table 3 shows the status of utilizing Science process skills in terms of Hypothesis Formulation. The learners' status of utilizing science process skills in terms of formulating hypothesis obtain very great extent ($M=4.37$, $SD=0.41$). This indicates that learners based their hypothesis from the problem statements and questions.

It was cited in Kitas (2021) that hypothesis testing requires choosing the most appropriate methodology and adequately powering statistically the study to be able to "prove" or "disprove" it within predetermined and widely accepted levels of certainty. This entails sample size calculation that often considers previously published observations and pilot studies.

The data shows that the respondents strongly agree ($M=4.70$, $SD=0.51$) that students begin with a research question that they want to answer. This entails that the formulation of hypothesis depends on the statement of the problems and variables of the

study.

As cited Hugo Hernandez (2020), the present essay is intended as a brief explanation and a provocative discussion of the mechanism of hypothesis formulation and testing, used for the construction of human knowledge and the advance of Science. Simply stated, hypotheses are possible answers to a specific research question. The validity of those hypotheses can be tested, in principle, from the observation of experimental results.

Hypothesis essentially summarizes what and how something will be investigated. This is important as it ensures that the researcher has carefully planned how the research will be done, as the researchers have to follow a set procedure to conduct research.

Table 4 shows the status of utilizing science process skills in terms of experimentation.



Table 4 Status of Utilizing Science Process Skills in Terms of Experimentation

STATEMENTS	MEAN	SD	REMARKS
I can select appropriate materials, equipment, and instruments needed for the experiment	4.19	0.45	Agree
I can identify potential safety hazards associated with the experimentation.	4.36	0.53	Strongly Agree
I consider safety protocols and provide necessary protective equipment.	4.31	0.49	Strongly Agree
I manage time effectively to meet project deadlines and milestones.	4.29	0.46	Strongly Agree
I allocate sufficient time for conducting the experiment, data collection, and analysis.	4.34	0.50	Strongly Agree
Weighted Mean	4.30		
SD	0.42		
Verbal Interpretation	Very Great Extent		

Table 4 shows the status of utilizing science process skills in terms of Experimentation. The learners' status of utilizing science process skills in terms of experimentation obtain very great extent ($M=4.30$, $SD=0.42$). This indicates of contributing factor for the interest and meaningful learning of science.

The data shows that the respondents strongly agree ($M=4.34$, $SD=0.50$) that students allocate sufficient time for conducting the experiment, data collection, and analysis. This entails that learners applies self efficacy in doing experiments by following time procedures in executing the step by step process.

Furthermore, experimentation (especially the communicative one) is an important contributing factor for the interest and meaningful learning of science. Therefore, it recognizes the importance of inserting experimentation in a problematical way in science education at the elementary school, as well as perform a review on the subject using articles, laws, and national programs and parameters, as well as these resources relate to the Textbook and basic Education regarding to experimentation.

Table 5 shows the status of utilizing science process skills in terms of drawing conclusion based from the findings.

Table 5 Status of Utilizing Science Process Skills in Terms of Drawing Conclusion

STATEMENTS	MEAN	SD	REMARKS
I based my conclusion from the analysis and interpretation of data.	4.50	0.53	Strongly Agree
I clearly state the main findings and their implications for the field.	4.36	0.53	Strongly Agree
I regulate my time effectively to ensure I complete academic tasks on schedule.	4.56	0.50	Strongly Agree
I seek feedback from peers, mentors, or experts on my conclusions	4.44	0.52	Strongly Agree
I ensure that the conclusions are accurately conveyed and supported by evidence.	4.35	0.48	Strongly Agree
Weighted Mean	4.46		
SD	0.44		
Verbal Interpretation	Very Great Extent		

Table 5 presents the status of utilizing Science process skills in terms of Drawing Conclusion. The learners' status of utilizing science process skills in terms of drawing conclusion obtain very great extent ($M=4.46$, $SD=0.44$). This indicates that conclusion must be accurate and supported by importance evidences based for the main findings and implications.

The data shows that the respondents strongly agree ($M=4.50$, $SD=0.53$) that students based their conclusion from the analysis and interpretation of data. This entails that learners aligned their conclusion based form the clearly stated data findings and implication from the study. In terms of the kinds of conclusions

that can be drawn, a study and its results can be assessed in multiple ways.

Moreover, the integrated science process skills include manipulating and interpreting data, controlling variables, defining operationally, formulating a hypothesis, and experimenting.

Table 6 shows the composite table of the status of utilizing science process skills.



Table 6 Composite Table of Utilizing Science Process Skills

INDICATORS	WM	SD	V. I.
Statement of Problem	4.36	0.44	Very Great Extent
Observation	4.48	0.38	Very Great Extent
Hypothesis formulation	4.37	0.41	Very Great Extent
Experimentation	4.30	0.42	Very Great Extent
Drawing conclusion	4.46	0.44	Very Great Extent
Overall Mean	4.39		
SD	0.42		
Verbal Interpretation	Very Great Extent		

Table 6 verifies the composite table of utilizing Science process skills. The learners' over all status of utilizing science process skills in obtain very great extent (M=4.39, SD=0.42).

This indicates that when instructing students to apply these scientific abilities, we are also educating them on practical skills for the workplace in the future in all aspects of their lives. The data shows that the respondents strongly agree (M=4.48, SD=0.38) in terms of observation. This indicates that observation skills by the students are evident skills shown by the students.

Because science is about questioning, asking questions and obtaining responses we all possess these abilities use in our everyday lives as we attempt to understand ordinary inquiries. When instructing students to apply these scientific abilities, we

are also educating them on practical skills for the workplace in the future in all aspects of their lives.

These skills are important for students as tools for exploration and investigation of the natural world, improving academic achievements and attitudes towards science, and promoting development of mental processes.

Level of Learners' Metacognition

In this study, the level of learner's metacognition of the students which include self-efficacy, self-learning, task completion, quality of work, and monitoring and control.

Table 7 shows the level of learner's metacognition in terms of Self-efficacy

Table 7 Level of Learner's Metacognition in Terms of Self-efficacy

STATEMENTS	MEAN	SD	REMARKS
I am confident in my ability to deal with unexpected situations.	4.26	0.47	Strongly Agree
I am confident in my ability to succeed academically.	4.49	0.50	Strongly Agree
I believe I can understand and master complex subjects.	4.46	0.58	Strongly Agree
I am confident are that i can adapt to changes in my environment.	4.64	0.48	Strongly Agree
I can effectively manage my time and resources to achieve my goals.	4.54	0.50	Strongly Agree
Weighted Mean	4.48		
SD	0.28		
Verbal Interpretation	Very Great Extent		

Table 7 illustrates the level of of learner's metacognition in terms of Self-efficacy. The learners' level of learner's metacognition in terms of Self-efficacy obtain very great extent (M=4.48, SD=0.28).

This indicates that self-efficacy is important in managing the time in reaching goals and objectives in every activity and learning process.

The data shows that the respondents strongly agree (M=4.48, SD=0.38) that the students can adapt to their environment. This

indicates that self-efficacy is affected by the environment which is crucial in metacognition process.

Science self-efficacy on the other hand can predict students' science academic achievement. Students with a higher sense of science self-efficacy have more confidence in their abilities, a greater willingness to successfully complete science tasks, and a stronger perseverance in completing difficult tasks.

Table 8 shows the level of learner's metacognition in terms of Self-learning.

Table 8 Level of Learner's Metacognition in Terms of Self-learning

STATEMENTS	MEAN	SD	REMARKS
I am good at managing my time and resources to facilitate my self-learning.	4.41	0.50	Strongly Agree
I set clear learning goals for myself.	4.61	0.49	Strongly Agree
I can identify my preferred learning style and use it to my advantage.	4.51	0.53	Strongly Agree
I am persistent and resilient in the face of challenges and setbacks in my learning journey.	4.56	0.50	Strongly Agree



I can effectively utilize a variety of learning resources, including online courses, books, and other educational materials.	4.39	0.49	Strongly Agree
Weighted Mean	4.50		
SD	0.46		
Verbal Interpretation	Very Great Extent		

Table 8 shows the level of learner’s metacognition in terms of Self-learning. The learners’ level of learner’s metacognition in terms of Self-efficacy obtain very great extent (M=4.50, SD=0.46). This indicates that self-learning is important in individuals initiate self-directed learning to find solutions to concrete goals or real-world problems.

The data shows that the respondents strongly agree (M=4.61, SD=0.49) that students set clear learning goals for themselves. This entails that learners put emphasis on establishing goals and objectives as scaffold in their self-learning process.

It is also a process where individuals take primary charge of

planning, continuing and evaluating their learning experiences and develop them cognitively and metacognitively in order to direct them into their own way of learning. In the same manner, students will master their ability to self-directed processes which provide them equal opportunity to learn not only from the given concepts but also from their discovery along the processes. And also, having the students provided with varied learning resources expand their horizon on experimenting and discovering new concepts.

Table 9 shows the level of learner’s metacognition in terms of Task Completion

Table 9 Level of Learner’s Metacognition in Terms of Task Completion

STATEMENTS	MEAN	SD	REMARKS
I set clear goals before starting a task.	4.76	0.43	Strongly Agree
I can identify the strategies that work best for me when completing a task.	4.69	0.47	Strongly Agree
I am able to regulate my time effectively to complete tasks within deadlines.	4.60	0.49	Strongly Agree
I reflect on my task completion process to identify areas for improvement.	4.79	0.41	Strongly Agree
I seek feedback from others to gain different perspectives on my task completion.	4.70	0.46	Strongly Agree
Weighted Mean	4.71		
SD	0.42		
Verbal Interpretation	Very Great Extent		

Table 9 illustrates the level of learner’s metacognition in terms of Task Completion. The learners’ level of learner’s metacognition in terms of Self-efficacy obtain very great extent (M=4.50, SD=0.46). This indicates that it is important to select strategies that is effective in completing certain task.

The data shows that the respondents strongly agree (M=4.61, SD=0.49) that students set clear learning goals for themselves. This entails that learners focus and reflect on task completion process to identify areas for improvement.

Table 10 shows the level of learner’s metacognition in terms of the quality of work.

Table 10 Level of Learner’s Metacognition in Terms of Quality of Work

STATEMENTS	MEAN	SD	REMARKS
I regularly reflect on the quality of my work and identify areas for improvement.	4.59	0.52	Strongly Agree
I am aware of my own thinking processes and decision-making while producing work.	4.69	0.47	Strongly Agree
I consider different perspectives and approaches to improve the overall quality of my work.	4.48	0.50	Strongly Agree
I set specific metacognitive goals to improve the quality of my work.	4.79	0.41	Strongly Agree
I monitor and evaluate my metacognitive processes during the completion of tasks.	4.58	0.50	Strongly Agree
Weighted Mean	4.62		
SD	0.43		
Verbal Interpretation	Very Great Extent		



Table 10 shows the level of learner’s metacognition in terms of Quality of Work. The learners’ level of learner’s metacognition in terms of Quality of Work obtain very great extent (M=4.62, SD=0.43). This indicates that quality of work include decision-making process while doing the task and activities.

The data shows that the respondents strongly agree (M=4.79, SD=0.41) that students set specific metacognitive goals to improve the quality of my work. This entails that learners reflect on task completion process to identify areas for improvement. This entails that learners focus on the feedback in competing task.

Table 11 shows the level of learner’s metacognition in terms of the quality of work

Table 11 Level of Learner’s Metacognition in Terms of Monitoring and Control

STATEMENTS	MEAN	SD	REMARKS
I regularly monitor my progress when working on academic tasks.	4.89	0.32	Strongly Agree
I am aware of distractions that may hinder my academic performance and take steps to control them.	4.68	0.47	Strongly Agree
I regulate my time effectively to ensure I complete academic tasks on schedule.	4.85	0.35	Strongly Agree
I am confident in my ability to control my thought processes during challenging academic tasks.	4.61	0.49	Strongly Agree
I set specific goals for my academic tasks to guide my monitoring of progress.	4.49	0.50	Strongly Agree
Weighted Mean	<i>4.71</i>		
SD	<i>0.25</i>		
Verbal Interpretation	<i>Very Great Extent</i>		

Table 11 presents the level of learner’s metacognition in terms of Monitor and Control.

The learners’ level of learner’s metacognition in terms of Quality of Monitor and Control obtain very great extent (M=4.71, SD=0.25). This indicates that setting goals serve as a guide on monitoring their progress.

It somehow helps improve precision about evidence and provide convincing data to be reflected on students’ output. In monitoring students’ metacognition, existing state of knowledge can be monitored focusing on the accuracy at predicting own memory and problem-solving performance. This process plays a vital role in developing students’ self-regulated learning abilities.

The data shows that the respondents strongly agree (M=4.79, SD=0.41) that students regularly monitor their progress when working on academic tasks. This entails that learners control and monitor their work regularly using time frames and patterns in order to follow the pace of their learning process.

Metacognition is not separate from cognition, but integral to all higher-order cognitive inferences, including explicit learning, skill development, recall of personal events, communication, decision making, problem solving, navigation, design, etc.

Table 12 shows the composite table of learner’s metacognition.

Table 12 Composite Table of Learner’s Metacognition

INDICATORS	WM	SD	V. I.
Self-efficacy	4.48	0.28	Very Great Extent
Self-learning	4.50	0.46	Very Great Extent
Task Completion	4.71	0.42	Very Great Extent
Quality of Work	4.62	0.43	Very Great Extent
Monitoring and Control	4.71	0.25	Very Great Extent
Overall Mean	<i>4.60</i>		
SD	<i>0.37</i>		
Verbal Interpretation	<i>Very Great Extent</i>		

Table 12 verifies the composite table of learner’s metacognition. The learners’ level of learner’s metacognition obtains very great extent (M=4.60, SD=0.37).

The data shows that the respondents strongly agree (M=4.71, SD=0.42) that task completion plays a significant role in learner’s metacognition. This entails that the quality of the learner’s outcome improves their level of metacognition in some aspects of learning process. Students with well-developed metacognition can identify concepts they do not understand and select appropriate strategies for learning those concepts. They know how to implement strategies they have selected and carry out their overall study plans. They can evaluate their strategies and adjust their plans based on outcomes.

This indicates that learner’s level of metacognition is significant in connection with their learning process. It helps them to think critically and improve their higher order thinking skills.



Table 13 shows the level of learner’s performance in terms of written test.

Table 13 Level of Learner’s Performance in Terms of Written Test

Score	F	%	Descriptive Equivalent
41 - 50	19	23.75	Outstanding
31 - 40	60	75.00	Very Satisfactory
21 - 30	1	1.20	Satisfactory
11 - 20	0	0.00	Fairly Satisfactory
0 - 10	0	0.00	Did not meet Expectation
Total	80	100	
Weighted Mean	37.36		
SD	2.68		
Verbal Interpretation	Very Satisfactory		

Table 13 presents the level of learner’s performance in terms of Written Test. The level of learner’s performance in terms of Written Test obtain very satisfactory (M=4.60, SD=0.37).

This indicates that learner’s level of performance in terms of written test provide information on how the science process

skills affect student learner’s outcome.

Table 14 shows the level of learner’s performance in terms of practical test of students in science.

Table 14 Level of Learner’s Performance in Terms of Practical Test

Description	PT1			PT2			PT3			PT4			PT5		
	Me an	SD	VI	Mean	SD	VI	Me an	SD	VI	Mea n	SD	VI	Mea n	SD	VI
Scientific Content	3.89	0.32	VS	3.84	0.37	V S	3.9	0.3	VS	3.86	0.35	VS	3.89	0.32	VS
Experimental	3.55	0.5	VS	3.69	0.47	V S	3.65	0.48	VS	3.61	0.49	VS	3.61	0.49	VS
Data Collection	3.9	0.3	VS	3.79	0.41	V S	3.88	0.33	VS	3.81	0.39	VS	3.89	0.32	VS
Communication Results	3.51	0.5	VS	3.71	0.46	V S	3.68	0.47	VS	3.58	0.5	VS	3.64	0.49	VS
Scientific Inquiry	3.95	0.22	VS	3.83	0.38	V S	3.86	0.35	VS	3.87	0.35	VS	3.87	0.35	VS
	3.76	0.27	VS	3.77	0.42	V S	3.79	0.39	VS	3.75	0.42	VS	3.78	0.40	VS

Table 14 presents the level of learner’s performance in terms of Practical Test. The level of learner’s performance in terms of Written Test obtain very satisfactory (M=3.77, SD=0.38). This indicates that learner’s level of performance was affected by the science process skills in learning process.

For learners, it provides efficient learning by focusing the student’s attention on what is important. It promotes retention and transfer of learning, promotes self-evaluation and self monitoring by the use of well-defined expectations and criteria, motivates learning by communicating progress concerning what a student knows or is able to do, and it shows evidence of work that can be used to get a job, scholarships, and entrance to the next stage of schooling.

The data shows that the respondents very satisfactory (M=3.95, SD=0.22) that scientific inquiry plays an important role in the performance of student in practical examination. This entails

that engaging students in scientific inquiry is an important component of science instruction that helps students develop scientific literacy and provides them with the opportunity to practice important science process skills in addition to critical thinking and problem-solving skills.

Thus, there emerged different forms, like alternative, authentic and performance assessments, which are labeled the most suitable for assessing science process skills demonstrated and developed by students during science laboratory and classroom performances in science that will enhance the students understanding about the selected topic being discussed.

Table 15 shows the relationship between utilizing science process skills and learner’s metacognition



Table 15 Significant Relationship Between Utilizing Science Process Skills and Learner’s Metacognition

SCIENCE PROCESS SKILLS		METACOGNITION				
		Self-efficacy	Self-learning	Task Completion	Quality of Work	Monitoring and Control
Statement of Problem	Pearson Correlation	0.819	0.889	0.591	0.569	0.569
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	89	89	89	89	89
	Strength	<i>Very Strong</i>	<i>Very Strong</i>	<i>Moderate</i>	<i>Moderate</i>	<i>Moderate</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Observation	Pearson Correlation	0.862	0.919	0.821	0.737	0.737
	Sig. (2-tailed)	1	0.335	0.000	0.000	0.000
	N	89	89	89	89	89
	Strength			<i>Very Strong</i>	<i>Strong</i>	<i>Strong</i>
	Analysis	<i>NS</i>	<i>NS</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Hypothesis formulation	Pearson Correlation	0.797	0.918	0.649	0.548	0.548
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	89	89	89	89	89
	Strength	<i>Strong</i>	<i>Very Strong</i>	<i>Strong</i>	<i>Moderate</i>	<i>Moderate</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Experimentation	Pearson Correlation	0.734	0.814	0.529	0.421	0.421
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	89	89	89	89	89
	Strength	<i>Strong</i>	<i>Very Strong</i>	<i>Moderate</i>	<i>Moderate</i>	<i>Moderate</i>
	Analysis	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Drawing conclusion	Pearson Correlation	0.859	0.963	0.873	0.705	0.705
	Sig. (2-tailed)	0.59	0.012	0.000	0.000	0.000
	N	89	89	89	89	89
	Strength		<i>Very Strong</i>	<i>Very Strong</i>	<i>Strong</i>	<i>Strong</i>
	Analysis	<i>NS</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>

Table 15 demonstrates the significant relationship between the utilizing science process skills and learner’s metacognition. Science process skills in terms of statement of the problem, observation, hypothesis formulation, experimentation, and drawing conclusion were observed to have a significant relationship to the learner’s metacognition in terms of self-efficacy, self-learning, task completion, quality of work, and monitoring and control.

This is based on the computed r values obtained from the tests with moderate to very strong relationship. Furthermore, the p-values obtained were less than the significance alpha 0.05, hence there is a significance.

This implies that science process skills are a reflection of the methods used by scientists while generating information on science. The science process skills include intellectual skills, associated psychomotor and affective skills that are concerned with the learning of science in all its aspects. Self-efficacy affects choice of activities, effort and persistence. People holding low self-efficacy for accomplishing a task may avoid it; those who believe they are capable are likely to participate. Especially when they encounter difficulties, efficacious students work harder and persist longer than those with doubts. These skills play a major role in learning processes of the students in science. It may help them to develop their own level of higher order thinking skills.

Table 16 shows the regression analysis on the status of utilizing science process skills on the learner’s performance.



Table 16 Regression Analysis on the Status of Utilizing Science Process Skills on the Learner's Performance

Written Test	B	SE	β	t	p
Constant	37.75	3.883		9.723*	0.000
Statement of Problem		3.174	1.725	0.543	0.589
Observation		2.353	-2.46	-1.04	0.3
Hypothesis formulation		2.9	-2.11	-0.73	0.47
Experimentation		2.813	-1.66	-0.59	0.557
Drawing conclusion		2.818	4.354	1.545	0.127
R-squared			.06		
Adjusted R-squared			-.000		
Standard Error of the Estimate		2.687			
F(5, 74)				.946	.457
Practical Test	B	SE	β	t	p
Constant	99.04	3.782		26.19*	0.000
Statement of Problem		3.092	-1.49	-0.48	0.632
Observation		2.292	-1.3	-0.57	0.571
Hypothesis formulation		2.825	-1.5	-0.53	0.598
Experimentation		2.741	-0.06	-0.02	0.982
Drawing conclusion		2.745	3.187	1.161	0.249
R-squared			.041		
Adjusted R-squared			-.02		
Standard Error of the Estimate		2.618			
F(5, 74)				0.634	.675

*p < 0.05

Table 16 presents the results of a multiple regression analysis examining the effect of utilizing science process skills on the learner's performance. This indicates that Statement of Problem, Observation, Hypothesis Formulation, Experimentation and Drawing conclusion have no significant effect on the learner's performance.

The F-test of the overall model is not significant (F(5, 74) with, $p > 0.05$), indicating that the regression model is not a good fit for the data. This implies that Science process skills simplify the learning of science, motivate the students, foster a sense of responsibility among them with respect to learning, enhance the permanency of learning.

4. CONCLUSION AND RECOMMENDATIONS

This study aimed to determine the relationship between Science Process Skills on Learner's Metacognition. In addition, it also determined the significant effect of science process skills to the learner's performances. With this, the following conclusion were drawn from the results of the study:

Utilizing science process skills was observed to have a significant relationship to the learner's metacognition. Thus, signifies the rejection of null hypothesis as science process skills include intellectual skills, associated psychomotor and affective skills that are concerned with the learning of science in all its aspects. Self-efficacy affects choice of activities, effort and persistence. Metacognitive skills and critical thinking skills have a positive correlation with process skills because the students' science process skills will be maximal if their metacognitive skills, as the control of the high order thinking, and the critical thinking skills are optimally developed, which is considered essential.

Meanwhile, the effect of utilizing science process skills on the learner's performance have no significant effect to the learner's performance. Thus, signifies the acceptance of null hypothesis.

Development and acquisition of science process skills (SPS) in science education are closely linked to the development of 21st-century skills and improvements in academic performance. To help facilitate the development of SPS in learners, teachers should acquire and exhibit SPS

Based on the results and conclusion posted in the study, the following recommendations were formulated:

1. Teachers may create educational opportunities that encourage inquiry-based learning, allowing students to participate actively in the scientific method.
2. Teachers and other stakeholders may put into practice project-based learning programs that mandate long-term, multidisciplinary projects from the students.
3. School Academic Organization may share teaching practices and gain a deeper understanding of science process skills through continuous professional development opportunities.
4. Teacher may motivate students to check their own learning with self-assessment exercises. Give students specific standards for achievement and give them guidance when assessing their own work in relation to these standards.

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EMPOWERING LEARNING: TECHNOLOGY-BASED LEARNING TOOLS ON THE MOTIVATION AND PERFORMANCE OF GRADE 7 LEARNERS

Rhealyn Banaag Amante

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

The study's main goal was to investigate the technology-based teaching strategies of Technology and Livelihood Education (TLE) teachers and their effect on the performance of Grade 7 learners. It specifically tried to answer several key questions about the extent of use of technology-based learning tools used by teachers. It also sought to determine the perceived level of learners' motivation and performance in written examinations and practical tests, and the significant effect of technology-based teaching strategies in TLE on learners' motivation and their performance.

The perceived level of learners' motivation was interpreted as Always Observed, which means that the goals and aspirations, interest and curiosity, self-efficacy and confident, teacher-learner relationship, and parental peer support are crucial for improving students' learning and motivation. The level of learner's performance in terms of written examinations and practical tests had descriptive equivalent of Outstanding and verbally interpreted as Closely Approximating Mastery.

Based on the findings, technology integration tools do not substantially affect learners' motivation, leading to the acceptance of the hypothesis. The analysis conducted on the integration of technology-based learning tools in TLE revealed that among the predictors, only audio-visual had a marginally significant effect on learners' performance, leading to the acceptance of both hypotheses. This means that technology integration tools do not substantially impact learners' motivation, and resources might be better redirected toward other aspects of the learning experience or used to enhance technology implementation strategies.

Therefore, TLE teachers should use technology-based learning tools in their classes. The students should develop a personal interest in using audio visuals, vlogs, video presentations, game-based/gamification, and podcasts. They should be promoted in teaching TLE subjects and be made available and affordable, especially to educators, educational institutions, and students who should be exposed to technology-based learning tools to improve their performance in written and practical tests in TLE subjects.

KEYWORDS: *technology-based; teaching strategies; Technology and Livelihood Education (TLE)*

1. INTRODUCTION

In recent times, technology has seamlessly woven into the fabric of daily existence, granting effortless access to vast reservoirs of data and information. The contemporary crop of students has been immersed in a technologically saturated environment since childhood, with its prevalence steadily rising. To cultivate an impactful 21st-century classroom tailored to student requirements, educators must consider student motivation and technology's transformative role in fostering inclusive educational practices.

Technology is a tool that allows for social interaction and easy creation of content by users. It is a pervasive force in the lives of 21st-century learners. Applications such as audio visual, vlogs, video presentation, game-based/ gamification and podcast enable users to express their thoughts, voice their opinions, and connect anytime and anywhere.

According to Kang (2019), technology-based teaching strategies have increased the use of social media. It enables users to access multiple social media sites through just a few clicks. This technology greatly impacts students, and a large number of studies have been conducted, each with a unique result.

Numerous educators have sought to harness the inherent advantages of integrating technology into their teaching methodologies. The essence of learning technology largely stems from its participatory nature, enabling the creation, sharing, and interaction with content and knowledge. This concept of technology-infused teaching strategies finds support in Wegell's (2019) assertion that learning is intrinsically intertwined with technology, as the mind evolves through its engagement with tools and media provided by the cultural milieu. While the term "technology" is widely comprehended, the precise definition of "social media" remains somewhat fluid. From the perspective of instructional design, social media platforms also facilitate the development of reusable digital content that can be readily updated and modified. This content can be annotated with descriptors, enhancing its searchability and accessibility. Such underlying principles of instructional design hold the potential to benefit students when they engage in independent study and require efficient information retrieval. Through diverse technological tools, the populace collectively contributes to the pool of knowledge by editing, tagging, and disseminating information digitally.

In line with this, the researcher explored empowering learning through technology-based learning tools on the motivation and performance of the Grade 7 learners in San Pedro City.



1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the extent of use of technology-based learning tools in the teachers in terms of:
 - 1.1. Audio-Visual
 - 1.2. Vlogs
 - 1.3. Video Presentation
 - 1.4. Game-based/Gamification, and
 - 1.5. Podcast?
2. What is the perceived level of learner’s motivation in terms of:
 - 2.1. goals and aspirations
 - 2.2 interest and curiosity
 - 2.3 self-efficacy and confidence
 - 2.4 teacher-learners’ relationship; and
 - 2.5 parental peer support?
3. What is the level of Learners’ Performance in terms of:
 - 3.1. Written Exam and
 - 3.2 Practical test?
4. Does utilizing technology-based learning tools in TLE significantly affect the learners’ motivation?
5. Do technology-based learning tools significantly affect the learners’ performance in TLE?

2. METHODOLOGY

A correlational method of research was used in this study. According to Barkha Devi (2023), a correlation reflects the relationship's strength and/or direction between two (or more) variables. The correlational method was used to investigate technology-based learning tools on the motivation and performance of grade 7 learners.

The study was correlational in nature as it reflected the status and conditions of technology-based learning tools used by TLE

teachers. Additionally, researchers considered factors such as sample size and potential confounding variables that could impact the relationship between variables.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results that were yielded from the treatment of the data that was gathered in this study.

The main goal of this study was to explore how empowering learning through technology-based learning tools affects the motivation and performance of learners. The study involved one hundred twenty (120) grade 7 students from Sampaguita Village National High School, Division of San Pedro.

The presentation of findings is based on the sequence of the statement of the problems, such as to determine the status of using technology-based learning tools of the teachers in terms of audio-visual, vlogs, video presentation, game-based/gamification, podcast and mean level of performance of grade 7 students in terms of written and practical test.

Furthermore, to find the technology-based learning tools' significant effect on learner’s motivation and performance in TLE. Integrating technology into teaching strategies can greatly enhance learning experiences and prepare students for the demands of the modern workforce. Incorporate social media platforms and online collaboration tools into TLE projects to promote teamwork, communication, and networking skills. Platforms like Facebook Groups, Slack, or Microsoft Teams can facilitate collaboration among students working on group projects.

Extent of Use of Technology-Based learning tools of the Teachers in terms of Audio-Visual, Vlogs, Video Presentation, Game-based/Gamification and podcasts was measured using mean and standard deviation.

Table 1.

Extent of use of the Technology-based Learning Tools of the Teachers in terms of Audio-Visual

STATEMENTS	MEAN	SD	REMARKS
1. My teacher uses Audio-Visual to increase the learning of learners.	4.33	0.71	Always
2. My teacher uses Audio-Visual to provide individual instructions for learners.	4.34	0.65	Always
3. My teacher uses Audio-Visual to arouse the interest of the learners.	4.31	0.70	Always
4. My teacher uses Audio-Visual to enrich and vary classroom activities	4.43	0.68	Always
5. My teacher uses audio-visuals to provide a real opportunity for choosing, purposing, planning, executing, and evaluating on the part of the learners.	4.48	0.67	Always
Weighted Mean		4.38	
SD		0.30	
Verbal Interpretation		Very Great Extent	

Table 1 illustrates the extent of teachers' use of technology-based learning tools.

Learners always observed that their teacher uses Audio-Visual to provide a real opportunity for choosing, purposing, planning, executing, and evaluating on the part of the learners (M=4.48,

SD=0.67). Additionally, their teacher uses Audio-Visual to arouse the interest of the learners” received the lowest mean score of responses with (M=4.31, SD=0.70). This implied that technology-based learning tools are vital in assessing learners' performance outcomes. The heightened engagement these tools



provide significantly impacts student performance and participation. Incorporating interactive elements, such as engaging multimedia features and dynamic activities, makes learning experiences more appealing, capturing students' attention and maintaining their interest. .

This increased engagement often translates into better participation and improved performance. Additionally, collaborative tools such as online forums, group projects, and peer assessments foster a sense of community and encourage collaborative learning.

The extent of use of the technology-based learning tools of the teachers attained a weighted mean score of 4.38 and a standard deviation of 0.30, which was a very great extent among the respondents. The result implied that most of the teachers agreed that computer technology is really important in enhancing the professional development of their instruction materials, especially in teaching technology and livelihood education. technology ensures that all students are assessed against the same criteria, reducing potential bias and ensuring a fair evaluation process.

Table 2.

Extent of use of the Technology-based Learning Tools of the Teachers in terms of Vlogs

STATEMENTS	MEAN	SD	REMARKS
1. My teacher uses blogs to present the content of his/her subject matter, tailored to the student's knowledge.	4.29	0.75	Always
2. My teacher uses blogs to allow the student to organize and distribute part of an assignment to be performed in the TLE subject.	4.40	0.65	Always
3. My teacher uses blogs to encourage student interest and learning motivation.	4.44	0.71	Always
4. My teacher uses blogs to improve the learners' communication skills.	4.62	0.66	Always
5. My teacher uses blogs to allow students to participate actively in their learning, determine their learning goals and share their knowledge to develop their understanding of the target learning activities.	4.48	0.71	Always
Weighted Mean	4.45		
SD	0.31		
Verbal Interpretation	Very Great Extent		

Table 2 shows the Extent of use of technology-based learning tools by the teachers in terms of Vlogs.

Learners always observed the use of blogs to improve their communication skills (M=4.62, SD=0.66). Additionally, it is also always observed that the teacher uses blogs to present the content of his/her subject matter, tailored to the student's knowledge (M=4.29, SD=0.75)

The overall weighed mean of 4.45 indicated that the extent of use of the technology-based learning tools of the teachers in terms of Vlogs was Very Great Extent among the respondents. The result implies that the teacher agreed that technology-based learning tools like vlogs make classroom management more interactive.

Table 3.

Extent of use of the Technology-based Learning Tools of the Teachers in terms of Video Presentation

STATEMENTS	MEAN	SD	REMARKS
1. My teacher uses video-presentation to improve performance of students in doing practical works.	4.43	0.68	Always
2. My teacher uses video-presentation to help the learners to understand the lesson/lectures better.	4.43	0.69	Always
3. My teacher uses video-presentation to understand the relations of various structures in the part shown.	4.38	0.69	Always
4. My teacher uses video-presentation to give students an engaging sensory experience.	4.52	0.63	Always
5. My teacher uses video-presentation to allow information from different perspectives.	4.52	0.62	Always
Weighted Mean	4.46		
SD	0.29		
Verbal Interpretation	Very Great Extent		

The Table above shows the Extent of use of the technology-based teaching strategies of the teachers in terms of Video Presentation.

The teacher always observed that the teacher uses video-presentation to provide students with an engaging sensory experience and allows information from different perspectives (M=4.52, SD=0.62). It is also always observed that the teachers



use video-presentation to understand their relations of various structures in the part shown with the lowest mean of $M=4.38$, $SD=0.69$.

The overall weighted Mean of 4.46 indicated that the extent of use of technology-based teaching strategies of teachers in terms of video presentation was interpreted as Very Great Extent. The result implies that the video-based presentation can motivate students to enhance their technology and livelihood education skills. Video-based presentations offer a dynamic and versatile tool for enhancing student motivation and skill development in Technology and Livelihood Education. By providing engaging, interactive, and practical learning experiences, videos can help students see the value and applicability of their education, driving them to enhance their skills and pursue excellence in their chosen fields.

The result of the study was related to the study of Silver (2020) cited that teaching Technology and Livelihood Education (TLE) through video presentations can be an effective way to engage students and enhance their learning experience.

Table 4 illustrates the extent of teachers' use of technology-based learning tools in terms of game-based/gamification.

Extent of Use of the Technology-based Learning Tools in terms of Game-based/Gamification

Learners always observed that their teacher uses game-based/gamification to increase verbal and memory performance ($M=4.50, SD=0.61$). It is also observed that their teacher uses game-based/gamification to enhance the learner's analytical and critical thinking skills ($M=4.23, SD=0.71$).

Table 4.

Extent of use of the Technology-based Learning Tools of the Teachers in terms of Game-based/Gamification

STATEMENTS	MEAN	SD	REMARKS
1. My teacher uses game-based/gamification to enhance the learner's analytic and critical thinking.	4.23	0.71	Always
2. My teacher uses game-based/gamification to improve the accuracy/speed of the hands.	4.39	0.69	Always
3. My teacher uses game-based/gamification to improve visual information accuracy.	4.38	0.69	Always
4. My teacher uses game-based/gamification to increase verbal and memory performance.	4.50	0.61	Always
5. My teacher uses game-based/gamification to increase students' engagement by capitalizing on student's intrinsic motivation.	4.48	0.70	Always
Weighted Mean		4.40	
SD		0.27	
Verbal Interpretation			Very Great Extent

The overall weighted mean of 4.40 revealed that the extent of use of the technology-based teaching strategies of the teachers in terms of Game-based/Gamification was interpreted as Very Great Extent. The result implies that gamification is one of the best innovations to make the lesson fun.

Extent of Use of the Technology-based Learning tools in Terms of Podcast

Table 5 presents the extent of use of technology-based learning tools by the teachers in terms of podcasts.

Learners always observed that their teacher uses podcasts to allow students to practice their listening comprehension of complex text that is both conversational and format ($M=4.45, SD= 0.70$). It is also always observed that their teacher uses podcasts to recognize/listen out to the words change in connected in the lessons yielded the lowest mean ($M=4.10, SD=0.79$).

The overall weighted mean of 4.28 was interpreted as a Very Great Extent. The result implies that podcasts can help students develop a range of language skills, from listening to reading, writing, note-taking, and speaking.

Table 5

Extent of use of the Technology-based Learning Tools of the Teachers in terms of Podcast

STATEMENTS	MEAN	SD	REMARKS
1. My teacher uses podcasts to recognize/listen out to the words change in connection in the lessons.	4.10	0.79	Always
2. My teacher uses podcasts to follow the transcription while listening.	4.22	0.76	Always
3. My teacher uses podcasts to help the learners to become better listeners.	4.18	0.79	Always
4. My teacher uses podcasts to allow students to practice their listening comprehension of complex texts that are both conversational and formal.	4.45	0.70	Always
5. My teacher uses podcasts to allow students to resonate with	4.43	0.71	Always



listeners on a deeper level.

Weighted Mean	4.28
SD	0.36
Verbal Interpretation	Very Great Extent

In addition, Podcasts have been utilized for amusement and relaxation. However, podcasts have become popular among educators as a teaching and learning tool in recent years. Podcasts, for instance, can be used by educators to offer lectures, assign homework, or foster interest-based

communities.

Learners' motivation levels include goals and aspirations, interest and curiosity, self-efficacy and confidence, teacher-learner relationships, and parental peer support.

Table 6.
Perceived Level of Learner's Motivation in terms of Goals and Aspirations

STATEMENTS	MEAN	SD	REMARKS
1. Being a learner, I understand the goals and importance of the lessons in real-life.	4.50	0.62	Strongly Agree
2. As a learner, I tend to set goals I cannot quite achieve to force me to try harder.	4.30	0.64	Strongly Agree
3. As a learner, I set challenging but achievable goals.	4.25	0.75	Strongly Agree
4. Being a learner allows me to set my goals and aspirations in life.	4.44	0.62	Strongly Agree
5. Being a learner, I challenge myself by setting goals that are just out of my reach.	4.47	0.71	Strongly Agree
Weighted Mean	4.39		
SD	0.29		
Verbal Interpretation	Always Observed		

Table 6 presents the perceived level of learner's motivation in terms of goals and aspirations.

Learners strongly agreed that the student understands the goals and importance of the lesson in real life (M=4.50, SD=0.62). It is also strongly agreed that the learners tend to set goals that he/she cannot achieve to force them to try harder and receive the lowest mean (M=4.30, SD=0.64). The overall weighted mean of 4.39 indicated that the respondents interpreted the perceived level of learners' motivation in terms of goals and aspirations as Always Observed. The result implies that goals and aspirations serve as guiding principles that propel you forward in your studies, helping you stay motivated, focused, and ultimately, successful.

In addition, goal focuses on achieving a specific, tangible outcome, an aspiration is more general. Aspirations also leave room for different outcomes and results. Setting and working towards goals teaches students valuable lessons in resilience and perseverance. They learn to overcome setbacks and

obstacles, developing the resilience needed to navigate challenges in education and life.

The perceived level of learner's motivation includes goals and aspirations, interest and curiosity, self-efficacy and confidence, teacher-learner relationship, and parental support.

Perceived Level of Learner's Motivation in terms of Interest and Curiosity

Table 7 shows the perceived level of learner's motivation in terms of interest and curiosity.

Learners strongly agreed with the statement that students are able to do more recreational activities in the lesson when the teacher used technology-based learning tools, yielded the highest mean (M=4.50, SD=0.66). Additionally, it also strongly agreed that the students enjoy investigating new ideas using technology-based learning tools received the lowest mean (M=4.35, SD=0.67) and was remarked as Strongly Agree.

Table 7.
Perceived Level of Learner's Motivation in terms of Interest and Curiosity

STATEMENTS	MEAN	SD	REMARKS
1. As a learner, I felt interested when my teacher used technology-based teaching strategies.	4.50	0.64	Strongly Agree
2. As a learner, I enjoy investigation new ideas using technology-based strategies.	4.35	0.67	Strongly Agree
3. As a learner, I can do more recreational activities in my lesson.	4.52	0.65	Strongly Agree
4. As learner, I actively participate in the discussion, answering exercises and/or clarifying things I did not understand.	4.40	0.70	Strongly Agree
5. As learner, I listen attentively to the lecture of my TLE	4.50	0.66	Strongly Agree



teacher.

Weighted Mean	4.45
SD	0.33
Verbal Interpretation	Always Observed

The perceived level of learner’s motivation in terms of interest and curiosity attained the overall weighted mean of 4.45 and interpreted as Always Observed. This implies that the interest and curiosity in learners motivate them to design learning experiences that are relevant, meaningful, and interactive. Incorporating real-world examples, encouraging exploration and inquiry, and providing opportunities for choice and autonomy can all help to spark and sustain learners' interest and curiosity.

In Technology and Livelihood Education, leveraging practical applications, multimedia resources, hands-on projects, and student autonomy can significantly boost students’ interest and curiosity, leading to a more dynamic and effective learning experience. Regular feedback and reflection activities can further sustain and amplify these motivational drivers.

Interest and curiosity are powerful motivators in education, driving deeper engagement and better learning outcomes. By making lessons relevant, interactive, and personalized, educators can enhance these intrinsic motivators.

Table 8.
Perceived Level of Learner’s Motivation in terms of Self-efficacy and Confident

STATEMENTS	MEAN	SD	REMARKS
1. As a learner, I can foster creative skills in my classroom.	4.37	0.69	Strongly Agree
2. As a learner, I can enhance my ability to take meaningful academic risks.	4.35	0.67	Strongly Agree
3. As a learner, I can understand the appropriate information/topics in my subject.	4.43	0.67	Strongly Agree
4. As a learner, I can accomplish my aims in learning.	4.51	0.62	Strongly Agree
5. As a learner, I can manage a difficult situations/topic	4.58	0.66	Strongly Agree
Weighted Mean		4.45	
SD		0.30	
Verbal Interpretation		Always Observed	

Table 8 presents the perceived level of learner’s motivation in terms of self- efficacy and confidence.

Learners strongly agreed that learners could manage difficult situations when the teacher used learning tools yielded the highest mean (M=4.58, SD=0.66). Additionally, it is also strongly agreed that the students are capable of enhancing their abilities to take meaningful academic risk using technology-based learning tools received the lowest mean (M=4.35, SD=0.67).

Overall, the perceived level of learner’s motivation in terms of self-efficacy and confident attained 4.45 weighted mean and interpreted as Always observed. This further means that the respondents manifest that self-efficacy and confidence impacted the quality of teaching and learning.

Table 9.
Perceived Level of Learner’s Motivation in terms of Teacher-learner’s Relationship

STATEMENTS	MEAN	SD	REMARKS
1. As a learner, I contribute a build positive atmosphere in the relationship with my teacher.	4.38	0.71	Strongly Agree
2. As a learner, I talk to my teacher about difficulties in lessons.	4.47	0.62	Strongly Agree
3. As a learner, I have a positive view of my teacher's strategies to promote unity, order, satisfaction, and less conflict in the classroom.	4.58	0.64	Strongly Agree
4. As a learner, I am able to ask for assistance without fear of rejection or embarrassment to my teacher.	4.37	0.66	Strongly Agree
5. As a learner, I view my teacher as a good person and feel that my teacher is a coach, mentor, or partner.	4.51	0.65	Strongly Agree
Weighted Mean		4.46	
SD		0.34	
Verbal Interpretation		Always Observed	

Table 9 shows the perceived level of learners’ motivation in terms of the teacher-learner relationship. Learners strongly agreed that the learner has a positive view of the learning tools used by the teacher to promote unity, order, satisfaction, and less conflict in the classroom received the highest mean (M=4.58, SD=0.64). It is also strongly agreed that



the learner contributes to a built positive atmosphere in the relationship with their teacher, getting the lowest mean (M=4.38, SD=0.71) and also remarked as strongly Agreeing.

Overall, the perceived level of learner’s motivation in terms of the teacher-learner relationship attained a 4.46 weighted mean and was interpreted as always observed. The result implies that providing emotional support and encouragement fosters the learner’s confidence and belief in their abilities. When learners feel supported, they are more motivated to engage in learning activities and strive for success.

Perceived Level of Learner’s Motivation in Terms of Parental Peer support

Table 10 presents the perceived level of learner motivation in terms of parental peer support.

Learners strongly agreed that being honest with their parents about academic performance received the highest mean (M=4.67, SD=0.51). It is also strongly agreed that the learners connect more with the help of parents got the lowest mean (M=4.47, SD=0.71).

Overall, the perceived level of learner’s motivation in terms of parental peer support attained a 4.54 weighted mean and interpreted as Always Observed. The result implies that when parents provide encouragement, understanding, and positive reinforcement, learners feel more motivated.

Table 10.
Perceived Level of Learner’s Motivation in terms of Parental Peer Support

STATEMENTS	MEAN	SD	REMARKS
1. As a learner, I am comfortable with my ability to study with my supportive parent.	4.53	0.65	Strongly Agree
2. As a learner, I have been to connect more with my parent's help.	4.47	0.71	Strongly Agree
3. As a learner, I get the emotional help and support I need from my parent.	4.51	0.62	Strongly Agree
4. As a learner, I can be confident in my decision with the support of my parent.	4.55	0.63	Strongly Agree
5. As learner, I am honest with my parents about academic performance	4.67	0.51	Strongly Agree
Weighted Mean		4.54	
SD		0.40	
Verbal Interpretation		Always Observed	

Knowing that their parents believe in them can boost their confidence and determination.

Level of Learner’s Performance in Written and Practical Tests

Table 11.
Level of Learner’s Performance in terms of Written Exam

Score	frequency	Percentage	Descriptive Equivalent
41 – 50	86	71.67	Outstanding
31 – 40	25	20.83	Very Satisfactory
21 – 30	9	7.50	Satisfactory
11 – 20	0	0.00	Fairly Satisfactory
1 – 10	0	0.00	Did not meet Expectations
Total	120	100	
Weighted Mean			42.03
SD			6.41
Verbal Interpretation			Closely Approximating Mastery

Table 11 presents the level of Learner’s Performance in terms of Written Exam. Out of one hundred and twenty respondents “41 to 50” received the highest frequency of eighty-six (86) or 71.67% of the total population with the descriptive equivalent of Outstanding. The “31 to 40” scores received the frequency of twenty-five (25) or 20.83% of the total population with the descriptive equivalent of Very Satisfactory. While the scores “21 to 30” received the lowest frequency of nine (9) or 7.50% of the total population with the descriptive equivalent of Satisfactory.

With a (Weighted Mean = 42.03, SD = 6.41), it shows that the level of Learner’s Performance in terms of Written Exam has a descriptive equivalent of Outstanding and is verbally interpreted as Closely Approximating Mastery. The result implies that the learners demonstrated sufficient understanding or proficiency in the material assessed. It’s a positive outcome indicating that they have achieved the desired level of competence in their written test.

The learners need experience in written tests, where they must defend their analyses in TLE subjects. These experiences are essential in their preparation for engaging in creating



formations that evolved from various functions.

CRITERIA	MEAN	SD	REMARKS
1. Proper use of Tools	4.69	0.59	Outstanding
2. Application Procedures.	4.70	0.65	Outstanding
3. Speed.	4.72	0.58	Outstanding
Weighted Mean	4.70		
SD	0.04		
Verbal Interpretation	Outstanding		

One of the reasons discovered for the poor performance was the lack of multimedia instructional materials that aid learning. This is because using appropriate multimedia materials concretely elucidates complex and abstract concepts such as genetics and evolution, consequently improving students' academic performance.

Level of Learner's Performance in terms of Practical test 1 and 2.

Table 12 shows the level of Learner's Performance in Practical Test 1 in Taking Body Measurement.

The teacher always observed that their student performance in Practical Test 1 in terms of speed got the highest mean of (4.72,

SD=0.58). It is also always observed that the students used proper tools with the mean of (M=4.69, SD=.59).

An overall (Weighted Mean = 4.70, SD = 0.04) shows that the Learner's Performance level in terms of Practical test 1 has a descriptive equivalent of Always Observed and verbally interpreted as Closely Approximating Mastery.

The result implies that practical tests are essential components of technology-based learning tools, as they play a vital role in assessing and developing students' practical skills, problem-solving abilities, and readiness for the real-world challenges they will encounter in their chosen fields.

Table 12.
Level of Learner's Performance in terms of Practical test 1 and 2.

CRITERIA	MEAN	SD	REMARKS
1. Application of Principles and Elements of Design	4.68	0.65	Outstanding
2. Creativity	4.76	0.53	Outstanding
3. Workmanship	4.74	0.59	Outstanding
Weighted Mean	4.73		
SD	0.06		
Verbal Interpretation	Outstanding		

In assessing the performance based on the provided rubrics, the evaluation is structured around three main criteria: proper use of tools, application procedures, and speed/time work allotment.

Firstly, regarding the proper use of tools, a rating of 5 indicates that the learner adeptly utilized the tools in accordance with safety measures while completing the task. This demonstrates competence in tool handling and a commitment to safety protocols. A rating of 3 suggests that the learner utilized the tools correctly but overlooked safety precautions, indicating a partial adherence to safety standards. Conversely, a score of 1 signifies a failure to properly utilize the tools and a complete disregard for safety precautions.

Secondly, in terms of application procedures, a rating of 5 implies that the learner executed the task with precision, accurately recording measurements following the prescribed procedures. This level of accuracy demonstrates a thorough understanding of the task requirements and meticulous attention to detail. A score of 3 indicates a somewhat lower level of accuracy, with the learner recording measurements correctly 80% of the time, indicating some proficiency but with room for improvement. On the other hand, a rating of 1 suggests significant deficiencies in following the correct procedures, with only 50% accuracy in measurement recording, reflecting a

need for further instruction and practice.

Finally, concerning speed/time work allotment, a rating of 5 signifies that the learner completed the activity within the allocated time frame, demonstrating efficiency and time management skills. This reflects an ability to work effectively under pressure and meet deadlines. Conversely, a rating of 3 indicates that the learner completed the task late, suggesting possible issues with time management or workflow efficiency. A score of 1 indicates a failure to accomplish the activity altogether, highlighting significant time management and task completion shortcomings.

Level of Learner's Performance in Terms of Practical Test 2

Table 12 also shows the level of Learner's Performance in Practical Test 2 in Principles of Design and Colors.

The teachers always observed that the performance of the learners in Creativity got the highest mean (M=4.76, SD=0.53). Additionally, it is always observed in applying principles and design elements with a mean of (M=4.68, SD= 0.65).

With an overall weighted mean of M= 4.73, SD= 0. 06 indicated that the level of Learner's Performance in terms of Principles of Design and colors in Practical test 2 has as descriptive equivalent of Always Observed and verbally



interpreted as closely approximating mastery. This means that the most crucial element of any design process is adhering to design principles. It would be quite difficult for users to comprehend the kind of message that the designer is attempting to convey without these guidelines.

The researcher used the rubrics to evaluate student performance based on three main criteria: application of principles and elements of design, creativity, and workmanship.

Firstly, in terms of applying principles and elements of design, a score of 5 indicates that the learner adeptly applied all the elements and principles of design accurately. This suggests a comprehensive understanding of design concepts and their effective integration into the task. Conversely, a rating of 3 suggests that while the learner attempted to apply these elements and principles, they did so inaccurately, indicating a partial grasp of design fundamentals. A score of 1 indicates a failure to apply any elements or principles of design, reflecting a lack of understanding or effort in this aspect.

Secondly, regarding creativity, a rating of 5 suggests that the learner not only performed the learning task properly but also applied creativity, demonstrating originality and innovation in their approach. This indicates a willingness to think outside the box and explore new ideas within the constraints of the task. A score of 3 implies that while the learner performed the task adequately, a lesser degree of creativity was evident in their work, suggesting some potential for more imaginative solutions. On the other hand, a score of 1 indicates a failure to perform the learning task at all, indicating a complete absence of creativity and engagement with the assignment.

Finally, in assessing workmanship, a rating of 5 implies that the learner accurately identified their client's body shape and created the design correctly, showing attention to detail and proficiency in execution. This suggests a thorough

understanding of client needs and the ability to translate them into a well-crafted design. A score of 3 suggests that while the learner identified the client's body shape, the resulting design was not entirely correct, indicating some deficiencies in execution or understanding. Conversely, a score of 1 indicates a failure to identify the client's body shape and create the design, highlighting significant shortcomings in both understanding client requirements and executing the task.

Overall, this rubric provides a structured framework for assessing student performance in design-related tasks, encompassing key criteria such as the application of design principles, creativity, and workmanship. By evaluating performance across these dimensions, educators can provide targeted feedback to help students improve their design skills and achieve their learning objectives.

Practical tests typically involve solving problems or completing tasks, which helps students develop critical thinking and problem-solving skills.

Technology-based learning tools often simulate real-world scenarios, making practical tests more relevant to students' future careers. This helps bridge the gap between theoretical knowledge and its application in professional settings.

Regression Analysis on the Effect of Technology-based Learning Tools on the Learner's Motivation

The table presents the results of a multiple regression analysis examining the effect of technology-based teaching strategies in TLE on the learner's motivation. Audio-Visual, Vlogs, Video Presentation, Game-based/Gamification, and Podcast have no significant effect on learner's motivation. This implied that technology-based learning tools enhance the effectiveness of assessments and provide personalized learning experiences. However, they do not significantly affect learners' motivation in terms of increasing their interest and curiosity.

Table 13.

Regression Analysis on the effect of technology-based learning tools in TLE on the learner's motivation

Audio-Visual	B	SE	β	t	p
Constant	4.089	.781		5.233*	.000
Goals and aspirations		.1	.077	.773	.441
Interest and curiosity		.087	.086	.985	.327
Self-efficacy and confident		.097	-.05	-.51	.611
Teacher-learner's relationship		.086	.01	.121	.904
Parental peer support		.074	-.06	-.78	.436
R-squared			.02		
Adjusted R-squared			.023		
Standard Error of the Estimate		.306			
F(5, 114)				.454	.81
Vlogs	B	SE	β	t	p
Constant	4.206	.795		5.289*	.000
Goals and aspirations		.101	.017	.172	.864
Interest and curiosity		.089	-.01	-.16	.872
Self-efficacy and confident		.098	-.07	-.73	.47
Teacher-learner's relationship		.088	.021	.243	.808
Parental peer support		.075	.099	1.318	.19
R-squared			.022		
Adjusted R-squared			.021		



Video Presentation					
	B	SE	β	t	p
Standard Error of the Estimate		.312			
F(5, 114)				.522	.759
Constant	5.628	.741		7.592*	.000
Goals and aspirations		.095	-.06	-.61	.545
Interest and curiosity		.083	-.14	-1.65	.103
Self-efficacy and confident		.092	.084	.921	.359
Teacher-learner's relationship		.082	-.1	-1.17	.244
Parental peer support		.07	-.06	-.82	.415
R-squared			.055		
Adjusted R-squared			.014		
Standard Error of the Estimate		.29			
F(5, 114)				1.33	.257
Game-based/Gamification					
	B	SE	β	t	p
Constant	4.147	.686		6.048*	.000
Goals and aspirations		.087	.047	.542	.589
Interest and curiosity		.077	.077	1.001	.319
Self-efficacy and confident		.085	-.05	-.59	.553
Teacher-learner's relationship		.076	-.07	-.97	.333
Parental peer support		.065	.055	.857	.393
R-squared			.025		
Adjusted R-squared			.017		
Standard Error of the Estimate		.269			
F(5, 114)				.592	.706
Podcast					
	B	SE	β	t	p
Constant	3.463	.923		3.754*	.000
Goals and aspirations		.118	.118	.999	.32
Interest and curiosity		.103	.176	1.704	.091
Self-efficacy and confident		.114	-.02	-.19	.846
Teacher-learner's relationship		.102	-.16	-1.57	.12
Parental peer support		.087	.072	.827	.41
R-squared			.051		
Adjusted R-squared			.01		
Standard Error of the Estimate		.361			
F(5, 114)				1.233	.298

*p < 0.05

Regression Analysis on the Effect of Technology-based Learning Tools on the Learner's Performance

The table presents the results of a multiple regression analysis examining the effect of technology-based learning tools in TLE to the learner's performance.

The regression analysis for the written exam revealed that only the audio-visual was significantly different. However, none of the individual predictors (constant, Vlogs, Video Presentation, Game-based/Gamification, and Podcast) showed that there is no significant.

Their p-values range from 0.1283 to 0.9798, indicating no significant effect on the written exam scores. Despite the lack of significance in individual predictors, the overall model explains 27% of the variance in the written exam scores (R-squared = 0.27), and the F-statistic of 6.361 (p = 0.027) suggests that the model is insignificant.

For practical test 1, the regression analysis results provided offer insights into the relationship between several predictor variables and a dependent variable. Each predictor variable, including Audio-Visual, Vlogs, Video Presentation, Game-based/Gamification, and Podcast, is examined for its effect on the dependent variable. The output includes coefficients, standard errors, standardized coefficients, t-values, and p-values for each predictor, providing a comprehensive view of their significance. The regression model may have overall statistical significance, the low adjusted R-squared value and non-significant predictor variables suggest that the model might not effectively explain the variability in the dependent variable. Further analysis or refinement of the model may be necessary to improve its predictive power.

Their p-values range from 0.1283 to 0.9798, indicating no significant effect on the written exam scores. Despite the lack of significance in individual predictors, the overall model explains 27% of the variance in the written exam scores (R-squared = 0.27), and the F-statistic of 6.361 (p = 0.027) suggests that the model is insignificant.



Table 14
Regression Analysis on the effect of technology-based learning tools in TLE on the learner's performance

Written exam	B	SE	β	t	p
Constant	68.32	18.824		3.6293*	0.0004
Audio-Visual		2.04	-0.453	-0.222	0.8248
Vlogs		1.9962	-0.051	-0.025	0.9798
Video Presentation		2.0565	-3.151	-1.532	0.1283
Game-based/Gamification		2.2656	-1.28	-0.565	0.5733
Podcast		1.6382	-1.034	-0.631	0.5292
R-squared			.27		
Adjusted R-squared			.16		
Standard Error of the Estimate		6.455			
F(5, 114)				6.361	.027
Practical test 1	B	SE	β	t	p
Constant	15.762	5.0507		3.1207*	0.0023
Audio-Visual		0.5474	-0.33	-0.603	0.548
Vlogs		0.5356	0.5156	0.9626	0.3378
Video Presentation		0.5518	-0.482	-0.874	0.3842
Game-based/Gamification		0.6079	0.2661	0.4377	0.6624
Podcast		0.4395	-0.358	-0.815	0.417
R-squared			.252		
Adjusted R-squared			.018		
Standard Error of the Estimate		1.732			
F(5, 114)				5.884	.0079
Practical test 2	B	SE	β	t	p
Constant	13.716	4.5945		2.9852	0.0035
Audio-Visual		0.4979	-0.986	-1.981*	0.05
Vlogs		0.4872	0.1866	0.3829	0.7025
Video Presentation		0.5019	0.2511	0.5002	0.6179
Game-based/Gamification		0.553	0.1923	0.3478	0.7287
Podcast		0.3998	0.4441	1.1106	0.2691
R-squared			.503		
Adjusted R-squared			.087		
Standard Error of the Estimate		1.578			
F(5, 114)				2.1081	.0399

*p < 0.05

For practical test 1, the regression analysis results provided offer insights into the relationship between several predictor variables and a dependent variable. Each predictor variable, including Audio-Visual, Vlogs, Video Presentation, Game-based/Gamification, and Podcast, is examined for its effect on the dependent variable. The output includes coefficients, standard errors, standardized coefficients, t-values, and p-values for each predictor, providing a comprehensive view of their significance. The regression model may have overall statistical significance, the low adjusted R-squared value and non-significant predictor variables suggest that the model might not effectively explain the variability in the dependent variable. Further analysis or refinement of the model may be necessary to improve its predictive power.

The analysis for practical test 2 shows that the constant term is significant with an intercept of 13.716 and a t-value of 2.9852 (p = 0.0035). Only Audio-Visual has a marginally significant effect among the predictors, with a coefficient of -0.986, a t-value of -1.981, and a p-value of 0.05. The other predictors (Vlogs, Video Presentation, Game-based/Gamification, and Podcast) do not significantly affect the scores, with p-values ranging from 0.2691 to 0.7287. The model explains 50.3% of the variance in practical test 2 scores (R-squared = 0.503), and

the F-statistic of 2.1081 (p = 0.0399) indicates that the model is significant overall.

The results implied that the combination of predictors could account for a substantial portion of the variance in the dependent variables, but individual predictors, except for Audio-Visual in practical test 2, do not significantly influence the outcomes.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study presented, the following conclusions were drawn:

Technology-based Learning tools in TLE have no significant effect on the Learner's Motivation. Thus, the hypothesis is accepted. This means that technology integration tools do not substantially impact learners' motivation, and resources might be better redirected toward other aspects of the learning experience or used to enhance technology implementation strategies.

However, the analysis conducted on the integration of technology-based learning tools in Technology and Livelihood Education (TLE) has revealed that among the predictors, only



Audio-visual has a marginally significant effect on learner performance. Therefore, the hypothesis is also accepted. It emphasized that the findings underscored the significant impact of technology-based learning tools on students' advancement in Technology and Livelihood Education (TLE), particularly in areas such as goal setting, interest, self-efficacy, teacher-learner relationships, and parental and peer support, all pivotal for enhancing learning outcomes and motivation.

Moreover, the efficacy of technology-based learning tools hinges on learners' aptitude for assimilation. These tools also foster technological integration within the classroom, collaborative TLE learning environments, and mutual engagement between students and educators. This collaborative approach enriches the learning process and cultivates an atmosphere conducive to the exchange of innovative teaching methods, where students actively contribute their perspectives and ideas.

Based on the conclusion formulated from the findings, the following recommendations are given:

1. Technology and Livelihood Education teachers may use technology-based learning tools in their TLE classes, and the students should develop personal interest in the use of audio-visuials, vlogs, video presentations, game-based/gamification, and podcasts. It should be promoted in teaching TLE subjects and made available and affordable to people, especially educators and educational institutions.
2. Students should be exposed to the use of technology-learning tools to improve their performance in written and practical tests in TLE subjects.
3. School Heads may develop an empowering program in the faculty development, such as seminars and workshops on using advanced technology in teaching and learning.

REFERENCE

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SCHOOL LEARNING ACTION CELL (SLAC) PROGRAM TO TLE TEACHERS ACROSS THEIR SPECIALIZATION: CHALLENGES AND COPING MECHANISM

Romelyn Alcantara Aquino

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This research aimed to investigate the school learning action cell (SLAC) program designed for Technology and Livelihood Education (TLE) teachers across their respective specialized areas to examine the challenges they encountered, the coping mechanism they employed, the monitoring and evaluation they employed and the significant relationship of the SLAC program and challenges encountered of TLE teachers to the coping mechanism.

The correlational research method was utilized to explore the school intervention programs and TLE teachers' management of challenges within their specialized fields. The respondents were 150 secondary TLE teachers from selected junior and senior high schools in San Pedro City, Laguna. The researcher utilized a researcher-made questionnaire to collect the data.

Analysis revealed that the level of SLAC programs was High; however, the level of challenges encountered was Moderately High, and the level of the teachers' coping mechanisms was very high. Regularly monitoring and evaluating the SLAC programs significantly impacted TLE teachers' coping mechanisms across their specializations. There was a significant relationship between the challenges encountered by teacher respondents and their coping mechanisms.

Based on the findings, it is concluded that the SLAC programs for TLE teachers have significant relationship with their coping mechanisms, leading to the rejection of the null hypothesis. Additionally, there is a significant relationship between the challenges encountered by teachers and their coping mechanisms; therefore, the hypothesis is also rejected. This implied that the program positively influences how these teachers cope with the challenges they face in their teaching roles.

The researcher advances that educational training is crucial for TLE teachers to develop professional competence. It is essential to raise awareness of the SLAC program among teachers. Their advantages may be more understood through workshops, seminars, and information sessions, providing teachers with extra skills and strategies to handle challenges and improve their teaching abilities.

KEYWORDS: *Technology and Livelihood Education (TLE); coping mechanism; SLAC*

1. INTRODUCTION

The widely embraced view in education and sustainable development posits that education, when of high quality, plays a central role in fostering societies that are economically successful, socially fair, and environmentally sustainable.

Schools and teachers play a crucial role in providing quality education. Quality education is essential for individual growth, personal development, and the progress of society as a whole. Here is how schools and teachers contribute to the curriculum and instruction skills development. Individualized training, moral and ethical development, personal development, cultural and social awareness and, most importantly, preparation for the future.

In line with this, the Department of Education released a policy establishing the Learning Action Cell (LAC) as a K-12 Basic Education Program School-Based Continuing Professional Development Strategy for Teaching and Learning Improvement. (DepEd Order # 35 s. 2016) This advocacy by DepEd implies that every teacher should be properly guided and equipped with the know-how of the teaching-learning processes by revisiting or reviewing some areas or concerns in performing the duties and responsibilities of an effective and efficient teacher. Successful teaching results from the systematic use of appropriate strategies for delivering and assessing the learning objectives targeted for the lesson. Thus, to facilitate the process of knowledge transmission, teachers

should apply appropriate teaching strategies that best suit specific objectives and level exit outcomes. In the past, many teachers used teacher-centered methods to convey knowledge to students rather than student-centered methods. Teachers play an important part in their students' intellectual growth by employing various examinations and instructional tactics to improve their performance in school subjects.

However, there are some cases in which teachers consistently teach subjects far outside their specialization (teachers teach across their specialization), so consider hiring specialists for those subjects. This may not always be possible due to budget constraints, but it's an option to explore.

Teaching across specializations as a TLE teacher is a complex task that requires flexibility, adaptability, and a commitment to meeting the unique needs of each student. It can be demanding but highly rewarding when students with diverse exceptionalities progress in their learning and development. However, many TLE teachers find themselves facing a unique challenge in teaching non-TLE subjects. In this study, we explore the importance of the School Learning Action Cell (SLAC) program to TLE teachers tasked with teaching non-TLE subjects and the importance of their adaptability and versatility in the modern educational system.



1.1 Statement of the Problem

Specifically, it seeks to answer the following questions:

1. What is the level of the school learning action cell (SLAC) program for teachers teaching across their specialization in terms of:
 - 1.1. goal setting;
 - 1.2. individualized learning plans;
 - 1.3. specialized instruction;
 - 1.4. technology integration, and
 - 1.5. flexibility and adaptability?
2. What do TLE teachers encounter the challenges in teaching across their specialization:
 - 2.1. content knowledge;
 - 2.2. appropriate teaching strategies;
 - 2.3. diverse learning needs;
 - 2.4. time constraints;
 - 2.5. emotional and psychological status?
3. What is the level of TLE teacher coping mechanism in teaching across their specialization in terms of:
 - 3.1. positive mindset;
 - 3.2. support network, and
 - 3.3. utilize available resources?
4. Do regular monitoring and evaluation of school learning action cell (SLAC) program for TLE teachers have a significant relationship to the coping mechanism?
5. Do the challenges encountered by the TLE teachers teaching across their specialization have a significant relationship to the coping mechanism?

analyses are used to quantify the strength and direction of relationships between variables. This study uses the correlational research method to investigate school intervention programs and how technology and livelihood education (TLE) teachers manage challenges within their specialized fields.

3. RESULTS AND DISCUSSION

This chapter provides the findings of the study. It also includes the presentation of data gathered and its analysis and interpretation.

The presentation of findings is based on the sequence of the problem statement, such as determining the level of school learning action cell program for teachers teaching across their specialization in terms of goal setting, individualized learning plans, specialized instruction, technology integration, and flexibility and adaptability. To identify the challenges TLE teachers encounter in teaching across their specialization, content knowledge, appropriate teaching strategies, diverse learning needs, time constraints, and emotional and psychological status. To determine the level of TLE teacher coping mechanisms in teaching across their specialization: positive mindset, support network, and utilizing available resources.

Furthermore, to find the significant correlation between the School Learning Action Cell program for TLE teachers teaching significantly their coping mechanism and the significant correlation between the challenges encountered by the teachers teaching across their specialization and coping mechanism.

The tables appeared according to the order and sequence of the variables raised in this study.

Level of School Learning Action Cell Program

The Level of School Learning Action Cell Program for TLE teachers teaching across their specialization includes goal setting, individualized instruction, technology integration flexibility, and adaptability. It is statistically named using mean and standard deviation.

2. METHODOLOGY

This study employed a correlational research method. According to Johansson 2019, this method involves examining the relationship between two or more variables without changing them. Correlational research is a type of scientific investigation that seeks to determine the degree of relationship or association between two or more variables.

Correlational research methods include collecting data through observations, surveys, or archival records and statistical

Table 1
 Level of School Learning Action Cell Program for TLE teachers in terms of Goal Setting

STATEMENTS	MEAN	SD	REMARKS
1. The goal setting is specific and narrow for more effective learning.	4.05	0.77	Often Observed
2. The goal setting is measurable and achievable based on the specific outcomes.	4.05	0.52	Often Observed
3. The goal setting can reasonably be accomplished within a certain time frame.	3.76	0.62	Often Observed
4. The goal setting should align with values and long-term objectives.	3.91	0.65	Often Observed
5. The goal setting is set at a realistic but ambitious end date to clarify task priorities and needs of the learners.	3.63	0.71	Often Observed
Weighted Mean	3.88		
SD	0.49		
Verbal Interpretation	High		



Table 1 illustrates the level of school learning action cell program for TLE teachers teaching across their specialization in terms of goal setting.

The teacher often observed that the school learning action cell program on their school focuses on specific goal setting for more effective learning, measurable and achievable based on the specific outcomes ($M=4.05$, $SD=0.77$, 0.52) respectively. Additionally, it is often observed also that the goal setting after the school learning action cell was a realistic but ambitious end date to clarify task priorities and needs of the learners. ($M=3.63$, $SD=0.71$).

The level of school learning action cell program for teachers teaching across their specialization in terms of goal setting attained a weighted mean score of 3.88 and a standard deviation of 0.49, which was high among the respondents. This further means that the school learning action cell program for teachers teaching across their specialization plays a crucial role in goal

setting by providing clarity, accountability, and a structured approach to achieving objectives. They help individuals or teams stay focused, track progress, overcome obstacles, and ultimately accomplish their goals effectively and efficiently.

The School Learning Action cells program helps TLE teachers to clarify what needs to be done to achieve the goal. They break down the goal into smaller, actionable steps, which provide clarity on what needs to be accomplished. The action cell represents a measurable step towards the goal. By completing these steps, one can track their progress and see how far they have come, which can be motivating and encouraging.

In addition, SLAC provides a platform for continuous professional development, allowing teachers to engage in collaborative learning activities regularly. This ongoing training helps teachers stay updated with the latest pedagogical strategies, educational technologies, and curriculum changes.

Table 2
Level of School Learning Action Cell Program for TLE Teachers in terms of Individualized Learning Plans

STATEMENTS	MEAN	SD	REMARKS
1. The Individualized Learning Plan helps students see beyond the walls of the classroom and imagine themselves in the future.	4.09	0.65	Often Observed
2. The individualized learning plan formulates a standard individualized plan format to give students practice in assessment-taking techniques.	3.93	0.70	Often Observed
3. The Individualized Learning Plan encourages planning, goal setting, and preparing for a greater chance of future success for the students.	3.89	0.81	Often Observed
4. The Individualized Learning Plan helps to understand students' learning abilities.	3.93	0.79	Often Observed
5. The Individualized Learning Plan develops a plan for academic and out-of-school learning opportunities they intend to complete	3.79	0.72	Often Observed
Weighted Mean	3.93		
SD	0.55		
Verbal Interpretation	High		

Table 2 illustrates the level of school learning action cell program for TLE teachers teaching across their specialization in terms of individualized learning plans.

Teachers often observed that the school action learning cell program focuses on individualized learning plans to help students see beyond the walls of the classroom and imagine themselves in the future ($M=4.09$, $SD=0.65$). Additionally, it is often observed that the individualized learning plan develops a plan for academic and out-of-school learning opportunities they intend to complete ($M=3.79$, $SD=0.72$).

Level of School Learning Action Cell Program in terms of Specialized Instruction

Table 3 presents the level of school learning action cell program for TLE teachers teaching across their specialization in terms

of specialized instruction.

Teachers often observed that the school learning action cell program focuses on specialized instruction and provides a list of instructional techniques/strategies that will reinforce concept skills learned ($M=4.07$, $SD=0.65$). Additionally, it is often observed that specialized instruction provides contextualized and indigenized resources or instructional materials suited to the learner's need ($M=3.67$, $SD=0.65$).

Overall, the level of school learning action cell program for teachers teaching across their specialization attained a weighted mean of 3.83 and interpreted as High. This mean that the specialized instruction provides specialize programs that helps learner to achieved their targets and assess the level of their understanding in TLE subject.



Table 3
Level of School Learning Action Cell Program for TLE Teachers in terms of Specialized Instruction

STATEMENTS	MEAN	SD	REMARKS
1. The Specialized Instruction provides a list of instructional techniques/strategies to reinforce concept skills learned.	4.07	0.65	Often Observed
2. Specialized Instruction ensures students with learning disabilities receive special instruction designed to meet their unique learning needs	3.78	0.69	Often Observed
3. Specialized Instruction provides activities and special instruction that allow learners to assess their understanding of what they have learned and with appropriate answers.	3.82	0.70	Often Observed
4. Specialized Instruction creates activities catering to all types of learners (diversity of learners).	3.79	0.72	Often Observed
5. The Specialized Instruction provides contextualized and indigenized resources/ instructional materials suited to the learner's needs.	3.67	0.65	Often Observed
Weighted Mean	3.83		
SD	0.51		
Verbal Interpretation	High		

Level of School Learning Action Cell Program in terms of Technology Integration

Table 4 shows the school learning action cell program level for TLE teachers teaching across their specialization regarding technology integration. The teacher observed that always observing technology integration promotes students' collaboration (M=4.23, SD=0.62). It is also always observed that technology integration establishes information and ideas from online and other educational websites (M=4.04,

SD=0.67).

The level of school learning action cell program for teachers teaching across their specialization in terms of technology integration attained overall weighted mean of 4.13 and interpreted as High. It is indicated that technology integration can create dynamic and engaging learning environments that respond to the diverse needs and learning styles of their students.

Table 4
Level of School Learning Action Cell Program for TLE Teachers in terms of Technology Integration

STATEMENTS	MEAN	SD	REMARKS
1. Technology Integration promotes students' collaboration	4.23	0.62	Always Observed
2. Technology Integration establishes one's own information and ideas from online and other educational websites.	4.04	0.67	Often Observed
3. The Technology Integration provides information on time, analyzes, synthesizes, and presents professionally to an authentic audience through technology.	4.07	0.72	Often Observed
4. Technology Integration allows the students to apply computer and technology skills to learning and problem-solving.	4.11	0.74	Often Observed
5. Technology integration improves students' learning processes and outcomes.	4.18	0.68	Often Observed
Weighted Mean	4.13		
SD	0.56		
Verbal Interpretation	High		

Level of School Learning Action Cell Program in terms of Flexibility and Adaptability

Table 5 illustrates the level of school learning action cell

program for TLE teachers teaching across their specialization in terms of flexibility and adaptability.



Table 5
Level of School Learning Action Cell Program for TLE Teachers in terms of Flexibility and Adaptability

STATEMENTS	MEAN	SD	REMARKS
1. The Flexibility and Adaptability trains and shares information in group	3.97	0.72	Often Observed
2. Flexibility and Adaptability: engage in learning when the lesson is flexible to all types of learners.	3.98	0.57	Often Observed
3. Flexibility and Adaptability engage suitable, flexible, and adaptable instructional strategies for all learners.	4.12	0.62	Often Observed
4. Flexibility and Adaptability adapt to any changes that may occur in the learning environment.	3.95	0.83	Often Observed
5. Flexibility and Adaptability incorporate or integrate flexible and adaptable instructions.	3.89	0.77	Often Observed
Weighted Mean	3.98		
SD	0.57		
Verbal Interpretation	High		

Teachers often observed that the school learning action cell program on their school focuses on flexibility and adaptability and engages in learning when the lesson is flexible to all types of learners (M=4.12, SD=0.62). Additionally, flexibility and adaptability are often observed to incorporate or integrate flexible and adaptable instructions (M=3.89, SD=0.77).

The result implied that collaboration and sharing of best practices among teachers from different subject areas should be encouraged. By fostering flexibility and adaptability in the SLAC program, schools can empower educators to respond effectively to the diverse needs of students and the evolving landscape of education, ultimately leading to improved teaching and learning outcomes.

The level of school learning action cell program for teachers teaching across their specialization in terms of flexibility and adaptability attained an overall weighted mean of 3.98 and was interpreted as High. This also implies that flexibility and adaptability lie in their capacity to cater to diverse learning needs and adapt to changing educational environments. Encourage teachers to reflect on their practice, share insights and best practices, and engage in ongoing professional

development to enhance their effectiveness.

Challenges Encountered by TLE Teachers

Challenges Encountered by TLE Teachers Teaching Across their Specialization includes content knowledge, appropriate teaching strategies, diverse learning needs, time constraints, emotional and psychological status, and statistical names using mean and standard deviation.

Challenges Encountered by TLE Teachers as to Content Knowledge

Table 6 illustrates the level of challenges encountered by TLE teachers in teaching their specialization as to content knowledge.

Teachers sometimes encounter challenges in teaching across their specialization; focusing on the content knowledge of the topic discussed in major subjects is strange for teachers, and they encounter difficulty in understanding terminologies in other fields/subjects (M=3.11, SD=1.05). Additionally, it is sometimes encountered that the inability to perform activities effectively is also encountered (M=2.83, SD= 0.95).

Table 6
Status of Challenges Encountered by TLE Teachers in Teaching as to Content Knowledge

STATEMENTS	MEAN	SD	REMARKS
1. The topics discussed in major subjects are strange to me.	3.11	1.05	Sometimes Encountered
2. I have difficulty understanding terminologies in other fields/subjects.	3.11	0.88	Sometimes Encountered
3. Preparing the day's learning activities inadequately.	3.01	1.10	Sometimes Encountered
4. Inability to perform effective activities.	2.83	0.95	Sometimes Encountered
5. Superficial/ shallow grasp or understanding of the subject matter.	2.90	1.05	Sometimes Encountered
Weighted Mean	2.99		
SD	0.87		
Verbal Interpretation	Moderately High		



The level of challenges encountered by TLE teachers in teaching their specialization as to content knowledge attained an overall weighted mean of 2.99 and was interpreted as Moderately High. This implies that the challenges TLE teachers face across this specialization in terms of content knowledge can lead to increased stress and burnout for teachers. Educators need to practice self-care and seek support from colleagues and administrators when needed.

Hess (2021) cited that managing a diverse classroom with students engaged in multiple subjects can be challenging. Teachers must establish clear expectations and routines to

maintain a productive learning environment. Addressing these challenges requires dedication, collaboration, and ongoing professional development to ensure effective teaching across specializations.

Level of Challenges Encountered as to Appropriate Teaching Strategies

Table 7 shows the challenges TLE teachers encounter in teaching across their specialization as to appropriate teaching strategies.

Table 7

Status of Challenges Encountered by TLE Teachers in Teaching as to Appropriate Teaching Strategies

STATEMENTS	MEAN	SD	REMARKS
1. Lack of skills in choosing appropriate activities in assessing student's learning	2.80	1.18	Sometimes Encountered
2. Lack of skills in constructing appropriate questions for appraising learners' understanding	2.77	1.22	Sometimes Encountered
3. Difficulty in providing varied learning tasks.	2.65	1.13	Sometimes Encountered
4. Lack of interest in the subject taught.	2.69	1.13	Sometimes Encountered
5. Problems in structuring the classroom to enhance learning activities.	2.84	1.09	Sometimes Encountered
Weighted Mean	2.75		
SD	1.05		
Verbal Interpretation	Moderately High		

Teachers sometimes encountered challenges in teaching across their specialization in structuring the classroom to enhance learning activities (M=2.84, SD=1.09). Additionally, teachers sometimes encountered difficulty in providing varied learning tasks (M=2.65, SD=1.13).

The overall weighted mean of 2.75 indicated that the level of challenges encountered by TLE teachers in teaching across their specialization as to appropriate teaching strategies was Moderately High. This further means that by incorporating appropriate teaching strategies into their instructional practices, educators can create engaging and effective learning

experiences that foster students' development across various specializations.

Kushnu 2021 presented a framework for effective teaching encompassing various instructional strategies, classroom management techniques, and assessment practices. It provides a holistic approach to improving teaching effectiveness. By incorporating appropriate teaching strategies into their instructional practices, educators can create dynamic and engaging learning experiences that cater to the diverse needs of students across various specializations.

Table 8

Status of Challenges Encountered by TLE Teachers in Teaching as to Diverse Learning Needs

STATEMENTS	MEAN	SD	REMARKS
1. Fails to recognize and respect each other due to race, culture, or ethnic orientation.	2.41	1.21	Seldom Encountered
2. Problems in managing classroom behavior, varying learning styles and abilities, language barriers, and cultural differences.	2.79	1.00	Sometimes Encountered
3. Lack of understanding of how to teach to diverse needs.	2.65	1.05	Sometimes Encountered
4. Lack of motivation and differences in cultural expectations.	2.62	1.11	Sometimes Encountered
5. Students have their own values and beliefs that lead to conflict among teachers and other students.	2.86	1.07	Sometimes Encountered
Weighted Mean	2.67		
SD	0.99		
Verbal Interpretation	Moderately High		

Table 8 presents the challenges TLE teachers encounter in teaching across their specializations in terms of diverse learning

needs. Teachers sometimes observe that the challenges encountered in



teaching across their specialization focus on the diverse learning needs of students who have their own systems of values and beliefs that lead to conflict among teachers and other students (M=2.86, SD=1.07). Teachers also sometimes encountered that failing to recognize and respect each other due to race, culture, or ethnic orientation” received the lowest mean (M=2.41, SD=1.21).

This means that the challenges encountered by TLE teachers in their specialization as to diverse learning needs attained an overall weighted mean of 2.67 and were interpreted as Moderately high. This implied that challenges require ongoing support, professional development, collaboration, and a commitment to meeting the diverse needs of each student in the classroom.

The result of the study related to the study of Ingrid (2020) cited that addressing the diverse learning needs of students with learning disabilities requires a multifaceted approach that involves collaboration, flexibility, and a commitment to meeting the individual needs of each student. Despite the

challenges, teachers play a critical role in supporting the academic and social-emotional growth of students with learning disabilities and helping them reach their full potential. Assessing student progress and meeting accountability requirements while accommodating diverse learning needs can be challenging. Teachers must use a variety of assessment tools and strategies to accurately measure student learning and provide meaningful feedback.

Blanca (2019) cited that teachers of students with learning disabilities often serve as advocates for their students, ensuring that their needs are met within the school and community. This can involve navigating bureaucratic systems, advocating for necessary accommodations and supports, and promoting awareness and understanding of learning disabilities among colleagues, parents, and the community. Adapting curriculum and teaching strategies to accommodate diverse learning needs can be challenging, particularly when faced with large class sizes and limited support.

Table 9
Status of Challenges Encountered by TLE Teachers in Teaching as to Time Constraints

STATEMENTS	MEAN	SD	REMARKS
1. Many tasks require attention and often focus on students' needs.	3.37	1.11	Sometimes Encountered
2. Endless paper works and extended working hours	3.65	1.12	Often Encountered
3. Incorporating technology into lessons is time-consuming.	2.86	1.16	Sometimes Encountered
4. Differentiating to accommodate various learning styles and abilities can be time-intensive.	3.03	1.06	Sometimes Encountered
5. Struggle to cover all the content within the allocated time, especially with the pressure to meet curriculum standards.	3.11	1.02	Sometimes Encountered
Weighted Mean	3.20		
SD	0.90		
Verbal Interpretation	Moderately High		

Table 9 illustrates TLE teachers' challenges in teaching across their specializations due to time constraints.

The Teacher observed that the endless paperwork and extended working hours (M=3.65, SD=1.12) were sometimes encountered. It is also sometimes encountered that the differentiation to accommodate various learning styles and abilities can be a time-intensive task (M=3.03, SD=1.06).

Overall, the weighted mean of 3.20 and standard deviation of 0.90 revealed that the level of challenges encountered by TLE teachers in teaching across their specialization due to time constraints was interpreted as Moderately High. The result implied that time constraints could limit their ability to develop engaging and effective instructional materials that cater to diverse learning styles and abilities.

Level of Challenges Encountered as to Emotional and Psychological Status

Table 10 shows the challenges TLE teachers encounter in teaching across their specialization in terms of emotional and psychological status.

Teachers sometimes encountered teaching challenges across their specialization, such as “Excessive stress in doing the task” (M=3.27, SD=1.04). Frustrations over one’s inadequacies are also sometimes encountered (M=3.05, SD=1.17).

The overall weighted mean of 3.01 and standard deviation of 0.97 indicated that the level of challenges encountered by TLE teachers in teaching across their specialization as to emotional and psychological status was interpreted Moderately High. This implied that teaching across specialization can lead to pressure for teachers to perform well in an unfamiliar subject, which can lead to high levels of stress, particularly if the teacher feels they are under constant scrutiny from students, parents, or administrators.



Table 10

Status of Challenges Encountered by TLE Teachers in Teaching as to Emotional and Psychological Status

STATEMENTS	MEAN	SD	REMARKS
1. Frustrations over one's inadequacies	3.05	1.17	Sometimes Encountered
2. Depression or feeling very low (inability to sleep well)	2.93	1.03	Sometimes Encountered
3. Ineffective use of multi-sensory aids.	2.66	1.17	Sometimes Encountered
4. Excessive stress in doing the task	3.27	1.04	Sometimes Encountered
5. High anxiety in working so hard at winning learner's trust.	3.13	1.21	Sometimes Encountered
Weighted Mean	3.01		
SD	0.97		
Verbal Interpretation	Moderately High		

Each child with a learning disability is unique, so teachers must tailor their approach to accommodate various learning styles and abilities. Managing Frustration: Children with learning disabilities may become frustrated when they struggle to understand concepts or complete tasks. Teachers must be patient and provide support to help students overcome these challenges.

Each child with a learning disability is unique, so teachers must tailor their approach to accommodate various learning styles and abilities. Managing Frustration: Children with learning disabilities may become frustrated when they struggle to understand concepts or complete tasks. Teachers must be patient and provide support to help students overcome these challenges.

Teachers need to create inclusive classrooms where all students feel valued and supported. This may involve implementing accommodations and modifications to the curriculum and promoting acceptance and understanding among peers.

Level of Teachers Coping Mechanism

Level of TLE Teacher Coping Mechanisms in teaching across their specialization include the positive mindset, support network, and utilization of available resources, statistically named using mean and standard deviation.

Level of Teacher Coping Mechanism in terms of Positive Mindset

Table 11 illustrates the TLE teacher coping mechanism level in teaching across their specialization in terms of a positive mindset.

The teacher observed that the Positive Mindset brainstormed and sought opportunities for learners and co-teachers to improve their positive mindset (M=3.35, Sd=0.62) and remarked as Extremely Useful. On the other hand, "The Positive Mindset manages behavior constructively by applying positive and non-violent discipline to ensure learning focused on the environment" got the lowest mean (M=3.23, SD=0.63), indicating that it is highly useful.

Table 11

Level of TLE Teachers Coping Mechanism in Teaching in terms of Positive Mindset

STATEMENTS	MEAN	SD	REMARKS
1. The Positive Mindset manages behavior constructively by applying positive and non-violent discipline to ensure learning focused on the environment.	3.23	0.63	Highly Useful
2. The Positive Mindset brainstorm and seek out opportunities for learners and co-teachers to improve positive mindset.	3.35	0.62	Extremely Useful
3. The Positive Mindset wins the esteem/respect of students.	3.33	0.68	Extremely Useful
4. The Positive Mindset working effectively with different kinds of students.	3.33	0.68	Extremely Useful
5. The Positive Mindset in handling disciplinary problems effectively.	3.29	0.62	Extremely Useful
Weighted Mean	3.31		
SD	0.54		
Verbal Interpretation	Very High		



Table 12
Level of TLE Teachers Coping Mechanism in Teaching in terms of Support Network

STATEMENTS	MEAN	SD	REMARKS
1. Support Network develops peer/ collegial support.	3.35	0.69	Extremely Useful
2. Support Network builds work-group norms of cooperation, not competition.	3.35	0.64	Extremely Useful
3. Support Network participates in collegial discussions using learners' feedback to enrich teaching practices.	3.07	0.53	Highly Useful
4. Support Network creates activities to encourage participation and shared leadership.	3.11	0.66	Highly Useful
5. Support Network collaborates and cooperates effectively with the team	3.15	0.63	Highly Useful
Weighted Mean	3.21		
SD	0.55		
Verbal Interpretation	High		

Table 12 presents the TLE teacher coping mechanism level in teaching across their specialization in terms of support network.

The teacher observed that the “support network develop peer/ collegial support”, yielded the highest mean (M=3.35, SD=0.69) and was remarked as Extremely Useful. On the other hand, “Support Network participates in the collegial discussion that uses learners' feedback to enrich teaching practices” got the lowest mean (M=3.07, SD=0.53) and was remarked as Highly Useful.

The result implied that the TLE teacher coping mechanism level in teaching across their specialization in terms of support network received an overall mean of 3.21 and a standard deviation of 0.55 a was interpreted as High. This further means that a support network within a school organization is essential for promoting the well-being of students and educators,

facilitating professional growth and collaboration, and creating a positive and effective learning environment conducive to academic success and personal development.

Level of Teacher Coping Mechanism in terms of Utilize Available Resources

Table 13 shows the Level of TLE teachers coping mechanisms in teaching across their specialization in terms of utilizing available resources.

The statement “Utilize Available Resources develop, organize and use appropriate resources including ICT to address learning goal” received the highest mean (M=3.41, SD= 0.66). On the other hand, “The Utilize Available Resources utilize contextualize and indigenize resource or materials” attained the lowest mean (M=3.01, SD=0.63) and was remarked as Highly Useful.

Table 13
Level of TLE Teachers Coping Mechanism in Teaching in terms of Utilize Available Resources

STATEMENTS	MEAN	SD	REMARKS
1. Utilize Available Resources to develop, organize, and use appropriate resources including ICT to address learning goals.	3.41	0.66	Extremely Useful
2. Utilize Available Resources Find resources such as databases, documentary films, and websites to utilize in-class sources of information.	3.05	0.71	Highly Useful
3. Utilize Available Resources and access internet resources for planning instruction and collecting ideas.	3.24	0.62	Highly Useful
4. The Utilize Available Resources utilize contextualize and indigenize resource or materials.	3.01	0.63	Highly Useful
5. The Utilize Available Resources use engaging instructional resources suitable for instructional purposes and learner's need.	3.35	0.64	Extremely Useful
Weighted Mean	3.21		
SD	0.55		
Verbal Interpretation	Very High		

The TLE teacher coping mechanism level in teaching across their specialization in terms of utilizing available resources achieved an overall weighted mean of 3.21 and a standard deviation of 0.55 and was interpreted as Very High. This means that utilizing available resources effectively in teaching is essential for creating engaging and impactful learning

experiences.

Ultimately, by strategically combining and leveraging these resources, educators can create learning environments that inspire curiosity, foster critical thinking, and enable students to attain their greatest potential.



Significant Correlation between the School Learning Action Cell Program and Coping Mechanism

The Significant Correlation between the School Learning Action Cell Program for TLE Teachers Teaching Across their Specialization and their Coping Mechanism.

Table 14 demonstrates the significant correlation between the School Learning Action Cell program for TLE teachers teaching across their specialization and their coping mechanism.

Table 14

Significant Correlation between the School Learning Action Cell Program for TLE Teachers and their Coping Mechanisms

SLAC PROGRAM		Teacher Coping Mechanism		
		positive mindset OVERALL	support network OVERALL	utilize available resources OVERALL
goal setting OVERALL	Correlation Coefficient	.375**	.541**	.564**
	Sig. (2-tailed)	.000	.000	.000
	N	150	150	150
individualized learning plans OVERALL	Correlation Coefficient	.531**	.617**	.585**
	Sig. (2-tailed)	.000	.000	.000
	N	150	150	150
specialized instruction OVERALL	Correlation Coefficient	.387**	.371**	.412**
	Sig. (2-tailed)	.000	.000	.000
	N	150	150	150
technology integration OVERALL	Correlation Coefficient	.397**	.484**	.551**
	Sig. (2-tailed)	.000	.000	.000
	N	150	150	150
flexibility and adaptability OVERALL	Correlation Coefficient	.348**	.551**	.530*
	Sig. (2-tailed)	.000	.000	.000
	N	150	150	150

The goal setting, individualized learning plans, specialized instruction, technology integration flexibility, and adaptability of the School Learning Action Cell program for TLE teacher teaching across their specialization was observed to have a significant correlation to the *positive mindset*, *support network*, and *utilize available resources* as TLE teacher coping mechanism. The p-value is less than 0.05 level of significance. This is based on the computed correlation coefficient values obtained from the tests.

In other words, the research findings imply a relationship between participating in the School Learning Action Cell program and the coping mechanisms TLE teachers utilize in their various specializations. This correlation implies that the program positively influences how these teachers cope with the challenges they face in their teaching roles.

This research has shown that interventions like the School Learning Action Cell (SLAC) program can positively affect teacher effectiveness and student achievement. By providing ongoing support and professional development opportunities, SLAC helps teachers improve their instructional practices, leading to better student learning outcomes.

Significant Correlation between the Challenges Encountered by the TLE Teachers and their Coping Mechanism

The Significant Correlation between the Challenges Encountered by the Teachers Teaching Across their Specialization and their Coping Mechanism.

Table 15

Significant Correlation between the Challenges Encountered by the TLE Teachers and their Coping Mechanisms

Challenges Encountered by Teachers		Coping Mechanism		
		positive mindset OVERALL	support network OVERALL	utilize available resources OVERALL
content knowledge OVERALL	Correlation Coefficient	.129**	.225**	.258**
	Sig. (2-tailed)	.000	.005	.004
	N	150	150	150
appropriate teaching strat OVERALL	Correlation Coefficient	.014**	.067**	.172**
	Sig. (2-tailed)	.000	.000	.000
	N	150	150	150



diverse learning needs	Correlation Coefficient	.096**	.022**	.073**
	Sig. (2-tailed)	.000	.000	.000
OVERALL	N	150	150	150
time constraints	Correlation Coefficient	.100	.295	.311
	Sig. (2-tailed)	.214	.986	.928
OVERALL	N	150	150	150
emotional and psychological	Correlation Coefficient	.062**	.061**	.150*
	Sig. (2-tailed)	.002	.029	.019
OVERALL	N	150	150	150

Table 15 demonstrates the significant correlation between the challenges encountered by the teachers teaching across their specialization and their coping mechanism.

The content knowledge, appropriate teaching strategies, diverse learning needs, and emotional and psychological status of the challenges encountered by the teacher teaching across their specialization were observed to have a significant correlation to the positive mindset, support network and utilize available TLE teacher coping mechanism resources.

This is based on the computed correlation coefficient values obtained from the tests. Furthermore, the p-values obtained were less than the significance alpha of 0.05; hence, there is a significance. This further means the techniques or approaches that teacher use to deal with or overcome the challenges they encounter in their teaching roles. Coping mechanisms can include a wide range of actions, such as seeking support from colleagues, adapting teaching methods, accessing professional development resources, managing stress, and maintaining a positive mindset.

While challenges encountered by teachers in terms of time constraints has no significant correlation to the positive mindset, support network and utilize available resources. This means that the coping mechanisms used by TLE teachers when facing challenges related to time constraints are not significantly correlated with their positive mindset, support network, or utilization of available resources.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings presented in the study, several conclusions have been drawn:

Firstly, the School Learning Action Cell (SLAC) program for TLE teachers demonstrates a statistically significant relationship with their coping mechanisms, leading to the rejection of the null hypothesis. This implied that the program positively influences how these teachers cope with the challenges they face in their teaching roles.

There is also a significant relationship between the challenges encountered by teachers teaching across their specialization and their coping mechanisms. Therefore, the hypothesis is also rejected. It was observed that the challenges faced by teachers teaching across their specialization, including content knowledge, appropriate teaching strategies, diverse learning needs, and emotional and psychological status, exhibit a significant correlation with factors such as positive mindset, support network, and utilization of available resources as

coping mechanisms. However, time constraints appeared to be an exception to this correlation.

Secondly, the study underscores the pivotal role of the School Learning Action Cells Program as a successful intervention embraced by Technology and Livelihood Education (TLE) educators teaching within their specialized domains. This program effectively addresses the inherent challenges inherent in their teaching roles. Through SLAC programs, TLE teachers can exchange ideas and best practices with colleagues, thereby enhancing their teaching strategies and approaches.

Lastly, the findings imply that coping mechanisms can empower educational institutions to enhance teacher support systems, fostering professional development. Ultimately, through initiatives like the School Learning Action Cell Program, the overall effectiveness of teaching can be elevated, benefiting both educators and students alike.

Based on the conclusion formulated from the findings, the following recommendations are given:

1. Educational preparation serves a vital role for TLE teachers teaching across their specialization to become competent in the teaching profession
2. Teachers require extensive training in goal setting, personalized learning plans, specialized instruction, integrating technology, and adaptability. Coping mechanisms should involve fostering a positive mindset and utilizing support networks effectively. This underscores the importance of enhancing the School Learning Action Cell (SLAC) program to meet teachers' needs and contribute to improving student performance.
3. Some of the challenges of schools in conducting SLAC could be addressed through ongoing collaboration among teachers under the leadership of the school principal, who should lead in organizing the LAC and ensuring that the practice of holding regular LAC sessions is established, maintained, and sustained.

REFERENCE

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FOOD AND BEVERAGE SERVICES INSTRUCTIONAL VIDEOS ON THE ACADEMIC ACHIEVEMENT AND ENGAGEMENT OF GRADE 11 TVL – HOME ECONOMICS STUDENTS: BASIS FOR TRAINING PROGRAM

Wennie Ramos Payag

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This study focused on the effect of Food and Beverage Services instructional videos on the participation and performance of Grade 11 TVL – Home Economics students in Pila Senior High School and Lalakay Senior High School. It sought to measure the level of acceptability of the instructional videos' content quality, such as objectives, discussion, demonstration, values integration, and performance evaluation; its technical qualities as to visual, sound, pronunciation, and time duration; students' participation status in peer interaction and active engagement and performance in written tests and hands-on tasks.

A quantitative approach with correlation analysis was employed to determine the significant effect of the instructional videos on students' participation and performance. The researcher designed a questionnaire validated by three (3) experts in the field of Technical Vocational Livelihood education from Pila and Los Baños sub-offices in the Schools Division of Laguna. Fifty TVL teachers and 100 grade 11 students selected through a purposive sampling technique served as the respondents of the study. The written tests and performance tasks for grade 11 senior high school students were also included in the study data.

Findings revealed that the instructional videos in Food and Beverage Services in terms of content and technical quality was highly acceptable, however, only the values integration under the content quality got the acceptable remarks. The level of students' participation in terms of peer interaction and active engagement was considered very high. The level of students' written test performance was very satisfactory, while they were all proficient in performance tasks or hands-on activities. Analysis also revealed that only Values Integration had a statistically significant effect on students' peer interaction. Discussion and time duration recorded statistically significant effect on students' active engagement, while other variables did not have a significant effect.

In sum, the results imply that values integration has a significant effect on students' participation, while other variables such as objectives, discussion, demonstration, performance evaluation, visual, sound, pronunciation, and time duration do not have a significant effect. Thus, null hypothesis is accepted. Additionally, it was also found out that values integration has a significant effect on students' performance tasks, and most variables such as objectives, discussion, demonstration, performance evaluation, visual, sound, pronunciation, and time duration do not have a significant effect. Thus, null hypothesis is accepted. This signifies that integrating values into the instructional content emerges as a critical determinant of students' success.

Therefore, it is recommended that TVL - Home Economics teachers prioritize integrating values into instructional video materials and activities in Food and Beverage Services. This can be done by ensuring that it is aligned with the broader curriculum objectives and learning outcomes by actively incorporating teamwork, communication, professionalism, and ethical considerations into the curriculum, which contribute to the holistic development of students. Future researchers interested in studying changes in students' skills over time in using instructional videos for Food and Beverage Services, a qualitative approach provides a valuable method to track these developments.

KEYWORDS: *instructional videos; participation; performance*

1. INTRODUCTION

Food and Beverage Services is one of the disciplines taught under the Technical Vocational Livelihood (TVL) Track Home Economics Strand. It is a part of the hospitality business where people are given food and drinks. This course aims to help a senior high school student acquire the knowledge, abilities, and mindset needed to complete the assignments. It encompasses the following key competencies: preparing the dining room/restaurant area for service, welcome guests and taking food and beverage orders, promoting food and beverage products, providing food and beverage services to guests, providing room service, and receiving and handling guest concerns.

The educational system has significantly transitioned since the advent of the digital era. These days' students behave and learn differently, and digital teaching resources are essential to the teaching-learning process. It has been noted that using instructional materials effectively can lead to both teaching and learning. The successful use of sufficient and high-quality teaching resources in the classroom can demonstrate the value of these resources for both teaching and learning. This set of instructional materials gives teachers all the resources they need to enhance student engagement and retention, particularly through instructional videos.

To ensure the effectiveness of instructional videos for classroom use, it was essential to focus on the quality of



content, instructional approach, and technical aspects. The evaluation tool developed by the Department of Education was employed to assess these instructional videos. This tool helped determine how well the video content aligned with the educational goals of the Food and Beverage Services curriculum.

These instructional videos were implemented at Pila Senior High School, Pila Sub-office, and Lalakay Senior High School, Los Baños Sub-office, where Grade 11 students in the Technical Vocational Livelihood track Home Economics strand were the primary beneficiaries. This decision stemmed from the pressing issue of internet connectivity challenges faced by most students. These challenges often hindered their access to online educational resources, disrupting the continuity of their learning. Consequently, the Food and Beverage Services TVL Teacher, who was also the lead researcher, recognized the need for a more accessible and dependable educational solution. Instructional videos offered a promising alternative to bridge the digital divide, providing students with a consistent and readily available source of educational content.

Furthermore, this study was informed by the findings of Almuslamani et al. (2020), who highlighted the significant impact of educational videos on student participation in the classroom. Their research emphasized that the choice of these videos, whether made by students or educators, directly and positively affected student engagement with the subject matter. Notably, videos selected by the students themselves had a more pronounced effect on increasing their participation than those chosen by teachers. This observation underscored the need for a thorough investigation of instructional videos validated by Master Teachers, catering to the unique learning needs and preferences of Grade 11 students in the TVL track.

In addition, this research aimed to address a critical gap in the existing literature by validating the role of instructional videos in improving the academic performance of Grade 11 students studying Food and Beverage Services in the TVL track. The study sought to provide educators and policymakers with valuable insights and recommendations to better support students in their pursuit of quality education, particularly in the face of technological disparities.

Lastly, multimedia resources, particularly instructional videos, had become a vital part of teaching and learning in the rapidly evolving educational landscape. This research, titled "Food and Beverage Services Instructional Videos on the Academic Achievement and Engagement of Grade 11TVL-Home Economics Students: Basis for Training Program," aimed to investigate the effectiveness of instructional videos as a supplementary educational tool, specifically for students in the Technical-Vocational-Livelihood (TVL) track. The study focused on validating these instructional videos, with particular attention given to the input of TVL Master Teachers.

1.1 Statement of the Problem

Specifically, this study sought to answer the following sub-problems.

1. What is the level of acceptability of the instructional videos in food and beverage services in terms of:
 - 1.1. Content quality as to:
 - 1.1.1. objectives
 - 1.1.2. discussion
 - 1.1.3. demonstration
 - 1.1.4. values integration
 - 1.1.5. performance evaluation?
 - 1.2. Technical quality as to:
 - 1.2.1. visual
 - 1.2.2. sound
 - 1.2.3. pronunciation
 - 1.2.4. time duration?
2. What is the level of students' participation in Food and Beverage services subject in terms of:
 - 2.1. peer interaction and
 - 2.2. active engagement?
3. What is the level of students' performance in Food and Beverage service subject in terms of:
 - 3.1. written test and
 - 3.2. hands-on task/performance task?
4. Does using instructional videos in Food and Beverage services significantly affect student participation?
5. Does using instructional videos in Food and Beverage services significantly affect student performance?

2. METHODOLOGY

A quantitative approach with correlational analysis was used as the study's research design. Hassan (2023) describes correlational research as investigating the connections between variables without directly manipulating them. This approach measures the degree of association, or correlation, between the variables. The goal is to identify if a relationship exists and how strong it might be. Correlational research often relies on surveys, observational studies, or analyzing existing data. In this study, the researcher employed correlational research to explore the relationship between using instructional videos in Food and Beverage Services classes and student participation and performance.

3. RESULTS AND DISCUSSION

This chapter mainly discusses the research problem of the study. The discussion is divided into five (5): the level of acceptability of the instructional videos regarding content and technical quality, the students' participation, the students' performance, and the significant effect of instructional videos in food and Beverage Services on the Students' Participation and Performance.

Level of Acceptability on the Content Quality of Instructional Videos in Food and Beverage Services

The increasing integration of multimedia resources in education has highlighted the importance of assessing the quality and effectiveness of instructional videos, particularly in specialized fields like Food and Beverage Services. This study focused on evaluating the level of acceptability of these instructional videos, specifically examining both their content and technical quality.



High-quality instructional videos can significantly enhance students' learning experiences by providing clear, comprehensive, engaging educational content and excellent visual and audio elements. By systematically assessing these videos, educators can ensure that they meet educational standards and effectively contribute to improved academic performance and student participation in Food and Beverage

Services courses.

Below is the level of acceptability of the instructional videos in food and beverage services in terms of content quality with regard to objectives, discussion, demonstration, values integration, and performance evaluation, which was treated statistically using mean and standard deviation.

Table 1 Acceptability Level of the Content Quality of Instructional Videos in Food and Beverage Services in terms of Objectives

STATEMENTS	MEAN	SD	REMARKS
<i>Content is consistent with topics/skills found in the DepEd Learning Competencies for the subject and grade/year level at which it was intended.</i>	4.37	0.81	Strongly Agree
<i>The objectives are Specific, Measurable, Attainable, Realistic, and Time-Bound (SMART).</i>	4.25	0.70	Strongly Agree
<i>It sufficiently caters to the learning needs of students and meets their educational objectives.</i>	4.47	0.63	Strongly Agree
<i>The instructional videos contribute to the achievement of the competencies, domains, and standards in the Curriculum Guide of Food and Beverage Services.</i>	4.26	0.80	Strongly Agree
<i>The instructional videos contain topics covered in the curriculum guide and can be accomplished according to the schedule.</i>	4.44	0.59	Strongly Agree
<i>Weighted Mean</i>	4.36		
<i>SD</i>	0.71		
<i>Verbal Interpretation: Highly Acceptable</i>			

Table 1 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of content quality with regard to objectives. The overall weighted mean is 4.36 with a standard deviation of 0.71, indicating a verbal interpretation of "Highly Acceptable." This shows that the respondents generally perceived the instructional videos to meet the educational objectives outlined for the subject effectively.

Bound (SMART), which received the lowest (M=4.25, SD=0.70). Although this was the lowest-rated statement, it still falls within the "Strongly Agree" category, showing that the objectives were perceived as well-defined and achievable.

Respondents strongly agreed that the instructional videos sufficiently cater to the learning needs of students and meet their educational objectives, with the highest (M=4.47, SD=0.63). This indicates a strong belief that the instructional videos are particularly effective in addressing and meeting students' educational needs and objectives.

This implies that instructional videos are a highly valued resource in the Food and Beverage Services curriculum, enhancing the learning experience by effectively aligning with educational objectives and meeting the standards required by the curriculum.

Additionally, respondents strongly agreed that the objectives are Specific, Measurable, Attainable, Realistic, and Time

Table 2 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of content quality with regard to discussion. The overall weighted mean is 4.29 with a standard deviation of 0.70, indicating a verbal interpretation of "Highly Acceptable." This demonstrates that the respondents generally found the instructional videos well-structured and informative in their discussions.



Table 2 Acceptability Level of the Content Quality of Instructional Videos in Food and Beverage Services in terms of Discussion

STATEMENTS	MEAN	SD	REMARKS
<i>The instructional videos are presented in logical progression coupled with persuasive information from reliable sources.</i>	4.32	0.69	Strongly Agree
<i>The instructional videos provide meaningful information and productive activities that are even more enriched by instructional approaches and strategies.</i>	4.38	0.71	Strongly Agree
<i>The content is free from ideological, cultural, religious, racial and gender biases, and prejudices.</i>	4.11	0.75	Agree
<i>The content stimulates and promotes critical thinking skills.</i>	4.27	0.72	Strongly Agree
<i>The content is logically developed and organized.</i>	4.36	0.61	Strongly Agree
Weighted Mean	4.29		
SD	0.70		
Verbal Interpretation: Highly Acceptable			

Respondents strongly agreed that the videos are useful for understanding fundamental Food and Beverage Services concepts with the highest (mean= 4.59, SD=0.62). This implies a strong consensus on the videos' effectiveness in conveying essential information in this field.

Additionally, respondents agreed that the content is free from ideological, cultural, religious, racial, and gender biases, and prejudices, which received the lowest (M=4.11, SD=0.75). Although this was the lowest-rated statement, it still falls within the "Agree" category, showing that the content was perceived as generally unbiased and inclusive.

This implies that instructional videos are highly valued for their logical progression, meaningful information, and enrichment through diverse instructional approaches. They effectively promote critical thinking and are well organized, making them a valuable Food and Beverage Services curriculum resource.

Below is the presentation of Table 3, which shows the level of acceptability of the instructional videos in Food and Beverage services in terms of content quality with regard to the demonstration. Five indicators were answered by the study respondents.

Table 3 Acceptability Level of the Content Quality of Instructional Videos in Food and Beverage Services in terms of Demonstration

STATEMENTS	MEAN	SD	REMARKS
<i>The instructional videos are useful in understanding fundamental concepts in Food and Beverage Services.</i>	4.59	0.62	Strongly Agree
<i>The learners can understand and study the instructional videos even without the facilitator.</i>	4.20	0.77	Agree
<i>The instructional videos encourage contextual learning or contextualization.</i>	4.11	0.67	Agree
<i>The instructional videos provide interaction, such as learners to learners, learners to teachers, and videos.</i>	4.43	0.81	Strongly Agree
<i>The instructional videos are suitable for the learners.</i>	4.09	0.91	Agree
Weighted Mean	4.28		
SD	0.75		
Verbal Interpretation: Highly Acceptable			



Table 3 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of content quality with regard to demonstration. The overall weighted mean is 4.28 with a standard deviation of 0.75, indicating a verbal interpretation of "Highly Acceptable." This reflects that the respondents found the instructional videos to be effective and appropriate in demonstrating key concepts and practices in Food and Beverage Services.

Respondents strongly agreed that the instructional videos are useful in understanding fundamental concepts in Food and Beverage Services, which received the highest (M=4.59, SD=0.62). This suggests a strong consensus that the videos effectively convey essential information in this field.

Conversely, respondents agreed that the instructional videos are suitable for the learners, which received the lowest (M=4.09, SD=0.91). Despite being the lowest-rated statement, it still

indicates a positive reception, showing that the videos are generally appropriate for the intended audience.

This implies that instructional videos are highly valued for their clarity in demonstrating fundamental concepts and facilitating interaction among learners and teachers. They support contextual learning and are deemed effective even when studied independently by learners, enhancing their usability and educational value in the Food and Beverage Services curriculum.

Table 4 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of content quality with regards to values integration. The overall weighted mean is 4.03 with standard deviation of 0.89, indicating a verbal interpretation of "Acceptable." This reflects that the respondents found the instructional videos to be satisfactory in integrating values into the educational content.

Table 4 Acceptability Level of the Content Quality of Instructional Videos in Food and Beverage Services in terms of Values Integration

STATEMENTS	MEAN	SD	REMARKS
<i>The instructional videos express one's spiritual beliefs while respecting the spiritual beliefs of others.</i>	4.19	0.88	Agree
<i>The instructional videos show adherence to ethical principles by upholding truth.</i>	3.98	0.94	Agree
<i>The instructional videos are sensitive to individual, social, and cultural differences.</i>	3.79	0.95	Agree
<i>The instructional videos demonstrate contributions toward solidarity.</i>	3.97	0.86	Agree
<i>The instructional videos demonstrate pride in being a Filipino and exercise a Filipino citizen's rights and responsibilities.</i>	4.24	0.82	Strongly Agree
<i>Weighted Mean</i>	4.03		
<i>SD</i>	0.89		
<i>Verbal Interpretation</i>	Acceptable		

Respondents strongly agreed that the instructional videos demonstrate pride in being a Filipino and exercising the rights and responsibilities of a Filipino citizen, which received the highest (M=4.24, SD=0.82). This suggests a strong recognition of the videos' effectiveness in promoting national pride and civic responsibility.

On the other hand, respondents agreed that the instructional videos are sensitive to individual, social, and cultural differences, which received the lowest mean (M=3.79, SD=0.95). Although this statement had the lowest rating, it still

indicates a positive reception, showing that the videos are generally seen as considerate of diverse backgrounds and perspectives.

This implies that the instructional videos are well-regarded for their ability to express and respect spiritual beliefs, uphold ethical principles, and promote solidarity. They are particularly noted for fostering a sense of national identity and civic duty among learners, highlighting their role in values education within the Food and Beverage Services curriculum.



Table 5 Acceptability Level of the Content Quality of Instructional Videos in Food and Beverage Services in terms Performance Evaluation

STATEMENTS	MEAN	SD	REMARKS
<i>The instructional videos effectively present information in a clear and understandable manner.</i>	4.40	0.84	Strongly Agree
<i>The instructional videos maintain a high level of engagement through visual elements, examples, and interactive features.</i>	4.20	0.71	Agree
<i>The instructional videos comprehensively cover the essential topics and skills related to the subject matter.</i>	4.32	0.69	Strongly Agree
<i>The instructional videos are adaptable to various learning styles, ensuring accessibility and effectiveness for a diverse audience.</i>	4.34	0.67	Strongly Agree
<i>The instructional videos are appropriate for the intended user.</i>	4.12	0.79	Agree
<i>Weighted Mean</i>	4.28		
<i>SD</i>	0.74		
<i>Verbal Interpretation</i>	Highly Acceptable		

Table 5 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of content quality with regards to performance evaluation. The overall weighted mean is 4.28 with a standard deviation of 0.74, indicating a verbal interpretation of "Highly Acceptable." This suggests that the instructional videos are well-received and highly effective for performance evaluation.

Respondents strongly agreed that the instructional videos effectively present information in a clear and understandable manner, which received the highest (M=4.40, SD=0.84). This reflects the clarity and comprehensibility of the content, which is a significant strength of the instructional videos.

On the other hand, respondents agreed that the instructional videos maintain a high level of engagement through visual elements, examples, and interactive features, which received the lowest (M=4.20, SD=0.71). Although this statement had the

lowest rating, it still indicates a positive reception, showing that the videos are generally engaging and interactive.

This implies that the instructional videos are highly valued for their clear presentation of information, comprehensive coverage of essential topics, and adaptability to various learning styles. They are particularly noted for their effectiveness in making the content accessible and engaging for a diverse audience, highlighting their role in enhancing performance evaluation within the Food and Beverage Services curriculum.

Level of Acceptability on the Technical Quality of Instructional Videos in Food and Beverage Services

The level of acceptability of the instructional videos in food and beverage services in terms of technical quality prelude visual, sound, pronunciation, and time duration were treated statistically using mean and standard deviation.

Table 6 Acceptability Level of the Technical Quality of Instructional Videos in Food and Beverage Services in terms of Visual

STATEMENTS	MEAN	SD	REMARKS
<i>The instructional videos contain appropriate color coordination.</i>	4.31	0.69	Strongly Agree
<i>The instructional videos are pleasing to the eyes of the viewers.</i>	4.09	0.75	Agree
<i>The instructional videos have special effects to enhance learning by drawing attention to specific attributes of the presented.</i>	4.16	0.72	Agree
<i>The instructional videos, as visuals, help the viewers understand difficult words more quickly.</i>	4.29	0.73	Strongly Agree
<i>The instructional videos, through their pictures, make learning enjoyable and interesting to the viewers.</i>	4.34	0.79	Strongly Agree



Weighted Mean 4.24
SD 0.74
Verbal Interpretation: Highly Acceptable

Table 6 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of technical quality with regard to visual elements. The overall weighted mean is 4.24 with a standard deviation of 0.74, indicating a verbal interpretation of "Highly Acceptable." This suggests that the respondents highly regard the visual quality of the instructional videos.

Respondents strongly agreed that the instructional videos, through their visuals, make learning enjoyable and interesting to the viewers, which received the highest (M=4.34, SD=0.79). This reflects the effectiveness of visual elements in enhancing the engagement and enjoyment of the viewers.

On the other hand, respondents agreed that the instructional videos are pleasing to the eyes of the viewers, which received the lowest (M=4.09, SD=0.75). Although this statement had the lowest rating, it still indicates a positive reception, showing that the videos are visually appealing.

This implies that instructional videos are highly valued for their appropriate color coordination, effective use of special effects, and ability to make complex concepts easier to understand through visual aids. The positive feedback highlights the importance of high visual quality in making learning enjoyable

and interesting, thereby enhancing the overall effectiveness of the instructional videos in the Food and Beverage Services curriculum.

Below is the table presentation of the level of acceptability of the instructional videos in Food and Beverage Services in terms of technical quality, which pertains to sound. It is believed that sound is one of the contributing factors to the betterment of an instructional video.

Table 7 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of technical quality with regard to sound. The overall weighted mean is 4.24 with a standard deviation of 0.77, indicating a verbal interpretation of "Highly Acceptable." This implies that the respondents highly regard the audio quality of the instructional videos.

Respondents strongly agreed that the vocabulary used in the narration is appropriate for the intended audience and that the background music or sound effects are conducive to learning, which received the highest mean of 4.34 with a standard deviation of 0.73. This reflects the effectiveness of the narration and sound design in facilitating an engaging and conducive learning environment.

Table 7 Acceptability Level of the Technical Quality Instructional Videos in Food and Beverage Services in terms of Sound

STATEMENTS	MEAN	SD	REMARKS
<i>The vocabulary used in the narration is appropriate for the intended audience and background music or sound effects are conducive to learning.</i>	4.34	0.73	Strongly Agree
<i>The audio quality of the recorded video is conducive to learning that uses narrations, music or sound effect that can be understood well.</i>	4.15	0.78	Agree
<i>The audio is clear, comprehensible, and dynamically balanced.</i>	4.17	0.74	Agree
<i>The audio effectively assists in communicating the message.</i>	4.19	0.80	Agree
<i>The music and/or sound effects complement the effectiveness of the presentations.</i>	4.33	0.78	Strongly Agree

Weighted Mean 4.24
SD 0.77
Verbal Interpretation: Highly Acceptable

On the other hand, respondents agreed that the audio quality of the recorded video is conducive to learning and uses narrations, music, or sound effects that can be understood well, which received the lowest (M=4.15, SD=0.78). Although this statement had the lowest rating, it still indicates a positive reception, showing satisfactory audio quality.

This implies that the instructional videos are highly valued for their clear and comprehensible audio, appropriate vocabulary, and effective use of music and sound effects to enhance the learning experience.

The positive feedback highlights the importance of high audio quality in making learning enjoyable and effective, thereby



enhancing the overall effectiveness of the instructional videos in the Food and Beverage Services curriculum.

Another technical quality with regard to pronunciation is considered another important quality of instructional videos.

Pronunciation by the character in the video plays an important role in delivering the lesson's content. Also, clear pronunciation can contribute to the success of the purpose of the video, which is to transfer knowledge among the students. This is presented in table 8.

Table 8 Acceptability Level of Technical Quality of Instructional Videos in Food and Beverage Services in terms of Pronunciation

STATEMENTS	MEAN	SD	REMARKS
<i>The speaker in the instructional video articulates words clearly and precisely.</i>	4.27	0.65	<i>Strongly Agree</i>
<i>The pronunciation of Food and Beverage service-related terminology is accurate and consistent throughout the video.</i>	4.39	0.82	<i>Strongly Agree</i>
<i>The speaker maintains an appropriate pace and rhythm, allowing viewers to follow the pronunciation without difficulty.</i>	4.29	0.64	<i>Strongly Agree</i>
<i>The pronunciation in the instructional video is easily understandable, minimizing any potential confusion or misinterpretation.</i>	4.31	0.72	<i>Strongly Agree</i>
<i>The speaker demonstrates cultural sensitivity in pronunciation, especially when pronouncing terms from diverse culinary traditions.</i>	4.15	0.81	<i>Agree</i>
<i>Weighted Mean</i>	4.29		
<i>SD</i>	0.73		
<i>Verbal Interpretation: Highly Acceptable</i>			

Table 8 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of technical quality with regard to pronunciation. The overall weighted mean is 4.29 with a standard deviation of 0.73, indicating a verbal interpretation of "Highly Acceptable." This signifies that the respondents highly regard the pronunciation quality of the instructional videos.

Respondents strongly agreed that the pronunciation of Food and Beverage service-related terminology is accurate and consistent throughout the video, which received the highest (M=4.39, SD=0.82). This reflects the effectiveness of the pronunciation in ensuring clarity and accuracy, which is essential for professional training in this field.

On the other hand, respondents agreed that the speaker demonstrates cultural sensitivity in pronunciation, especially when pronouncing terms from diverse culinary traditions, which received the lowest (M=4.15, SD=0.81). Although this

statement had the lowest rating, it still indicates a positive reception, showing that cultural sensitivity is reasonably well-maintained in the videos.

This implies that the instructional videos are highly valued for clarity, accuracy, and appropriate pronunciation pacing. The positive feedback highlights the importance of precise and culturally sensitive pronunciation in enhancing understanding and minimizing confusion, thereby enhancing the overall effectiveness of the instructional videos in the Food and Beverage Services curriculum.

Time duration is another significant factor in assessing or evaluating instructional videos. It consisted of the appropriate pacing of the content of the video. Also, the length of the videos should be based on the students' interests. The data is presented below in table 9.



Table 9 Acceptability Level of Technical Quality of Instructional Videos in Food and Beverage Services in terms of Time Duration

STATEMENTS	MEAN	SD	REMARKS
The instructional video duration is appropriate for the target audience's attention span, maintaining engagement throughout.	4.23	0.76	Strongly Agree
The duration allows for comprehensive coverage of the essential content without sacrificing depth or understanding.	4.22	0.73	Agree
The video communicates information clearly and concisely within the allocated time, avoiding unnecessary elaboration.	4.34	0.67	Agree
The instructional video is divided into manageable segments, facilitating easy navigation and comprehension for viewers.	4.30	0.67	Strongly Agree
The time duration is effectively utilized to convey key concepts and skills, maximizing instructional value.	4.38	0.63	Strongly Agree
Weighted Mean	4.29		
SD	0.69		
Verbal Interpretation	Highly Acceptable		

Table 10 presents the level of acceptability of the instructional videos in Food and Beverage Services in terms of technical quality with regard to time duration. The overall weighted mean is 4.29 with a standard deviation of 0.69, indicating a verbal interpretation of "Highly Acceptable." This means that the respondents highly regard the duration of the instructional videos.

Respondents strongly agreed that the time duration effectively conveys key concepts and skills, maximizing instructional value, which received the highest (M=4.38, SD=0.63). This reflects the effectiveness of the videos in using time efficiently to deliver valuable content.

On the other hand, respondents agreed that the duration allows for comprehensive coverage of the essential content without sacrificing depth or understanding, which received the lowest (M=4.22, SD=0.73). Although this statement had the lowest rating, it still indicates a positive reception, showing that the videos managed to cover necessary content thoroughly within the allocated time.

This implies that the instructional videos are highly valued for maintaining engagement, clarity, and conciseness within appropriate time frames. The positive feedback highlights the importance of well-managed time duration in enhancing the overall effectiveness of the instructional videos in the Food and Beverage Services curriculum.

Students' Participation

The status of students' participation in food and beverage service subjects in terms of peer interaction and active engagement was treated statistically using mean and standard deviation.

Table 10 presents the status of students' participation in terms of peer interaction. The overall weighted mean is 4.46 with a standard deviation of 0.68, indicating a verbal interpretation of "Very High." This signifies that the use of instructional videos has significantly fostered peer interaction among students in the Food and Beverage Services course.

Table 10 Status of Students' Peer Interaction

STATEMENTS	MEAN	SD	REMARKS
<i>The offline instructional videos have encouraged peer discussions and collaborations among students.</i>	4.36	0.63	Strongly Agree
<i>I believe that peer interactions have been positively influenced by the use of offline instructional videos.</i>	4.35	0.80	Strongly Agree
<i>The videos have improved our collective understanding of the Food and Beverage Services subject.</i>	4.43	0.64	Strongly Agree
<i>Peer interactions have helped us collectively overcome challenges and difficulties in our studies.</i>	4.54	0.61	Strongly Agree



<i>These videos have made working together on assignments and projects with classmates more enjoyable.</i>	4.51	0.66	Strongly Agree
<i>The use of offline instructional videos has enhanced our group work and peer discussions.</i>	4.54	0.64	Strongly Agree
<i>Interacting with peers after watching these videos makes us more motivated to participate in class activities.</i>	4.63	0.58	Strongly Agree
<i>Peer interactions have allowed us to gain different perspectives on the subject matter presented in the videos.</i>	4.52	0.61	Strongly Agree
<i>We feel that peer interaction effectively complements the content presented in the offline instructional videos.</i>	4.50	0.76	Strongly Agree
<i>We believe that peer interactions, as a result of these videos, have significantly contributed to our collective academic growth</i>	4.19	0.90	Agree
Weighted Mean	4.46		
SD	0.68		
Verbal Interpretation	Very High		

Respondents strongly agreed that interacting with peers after watching these videos makes them more motivated to participate in class activities, which received the highest (M=4.63, SD=0.58). This reflects the effectiveness of the instructional videos in boosting motivation and participation through peer interaction.

On the other hand, respondents agreed that peer interactions, as a result of these videos, have significantly contributed to their collective academic growth, which received the lowest (M=4.19, SD=0.90). Although this statement had the lowest rating, it still indicates a positive impact, showing that peer interactions are beneficial for academic growth.

Table 11 presents the status of students' participation in terms of active engagement. The overall weighted mean is 4.29 with a standard deviation of 0.78, indicating a verbal interpretation of "Very High." This implies that the use of instructional videos has significantly enhanced active engagement among students in the Food and Beverage Services course.

Respondents strongly agreed that they are actively engaged during the offline instructional videos and feel motivated to watch them, which received the highest (M=4.55, SD=0.67). This reflects the effectiveness of the instructional videos in maintaining student motivation and engagement.

Table 11 Status of Students' Active Engagement

STATEMENTS	MEAN	SD	REMARKS
<i>I am actively engaged during the offline instructional videos and feel motivated to watch them.</i>	4.55	0.67	Strongly Agree
<i>The videos enhance my understanding of the subject matter, keeping me engaged throughout.</i>	4.36	0.90	Strongly Agree
<i>I find myself participating more actively in class discussions after viewing the videos.</i>	4.19	0.83	Agree
<i>The videos encourage me to ask questions and seek clarification from my teacher and peers.</i>	4.19	0.68	Agree
<i>I am more eager to complete assignments and tasks related to the Food and Beverage Services subject.</i>	4.25	0.70	Strongly Agree
<i>Watching these videos sparks my interest in exploring the subject further outside of class.</i>	4.33	0.79	Strongly Agree
<i>The videos foster a sense of curiosity and a desire to learn</i>	4.21	0.87	Strongly Agree



more about the subject.

The videos make learning enjoyable and interactive, which keeps me actively engaged. 4.35 0.64 Strongly Agree

I believe that the offline instructional videos positively impact my overall academic involvement. 4.30 0.77 Strongly Agree

My active engagement with the videos has contributed to an improvement in my academic performance. 4.18 0.90 Agree

Weighted Mean 4.29
 SD 0.78
 Verbal Interpretation Very High

On the other hand, respondents agreed that their active engagement with the videos has improved their academic performance, which received the lowest (M=4.18, SD=0.90). Although this statement had the lowest rating, it still indicates a positive impact, showing that the videos help improve academic performance.

Student's Performance

The level of students' performance in terms of written works and performance tasks was analyzed statistically using frequency and percentage. This approach provided a detailed understanding of how students performed in different assessment areas by quantifying their achievements and participation.

Table 12 Level of a Students' Performance Written Works

Scores	Frequency	Percentage	Remarks
17-20	13	13.00%	Outstanding
13-16	53	53.00%	Very Satisfactory
9-12	20	20.00%	Satisfactory
5-8	14	14.00%	Unsatisfactory
0-4	0	0.00%	Poor
Total	100	100%	

Weighted Mean 13.00
 SD 4.00

Table 12 presents the level of students' performance in terms of their written works is indicated by a weighted mean of 13.00 and a standard deviation of 4.00. This implies that, on average, students scored 13 out of a possible 20 points, reflecting a general performance level that falls within the "Very Satisfactory" range.

The highest frequency of scores falls within the 13-16 range, with 53 students, or 53.00%, achieving this score. This range is marked as "Very Satisfactory," indicating that over half of the students performed well above average in their written works.

The lowest frequency of scores falls within the 0-4 range, with no students (0.00%) scoring in this category. This range is marked as "Poor," showing that none of the students performed at the lowest level in their written works.

These results entail that most students are performing at a "Very Satisfactory" level in their written works, with very few students scoring at the lower end of the spectrum. This indicates a strong overall performance in written tasks, with room for improvement to elevate more students into the "Outstanding" category.



Table 13 Level of a Students' Performance Tasks I to IV

Criteria	Mean				SD				Remarks
	PT1	PT2	PT3	PT4	PT1	PT2	PT3	PT4	
Professionalism	3.83	3.73	3.74	3.80	0.89	0.94	0.98	0.92	Proficient
Attention to Detail	3.65	3.61	3.54	3.75	0.94	0.93	0.96	0.98	Proficient
Efficiency and Timeliness	3.54	3.65	3.72	3.73	0.99	0.86	1.07	1.04	Proficient
Accuracy of Service	3.53	3.61	3.73	3.74	0.93	0.92	1.09	0.98	Proficient
Overall	3.64	3.65	3.68	3.76	0.93	0.91	1.03	0.98	Proficient

Table 13 presents the level of students' performance in terms of Performance Task I to IV, which is indicated by an overall mean and a standard deviation interpreted as proficient. This shows that students generally function proficiently in all areas of the assessment.

The level of students' performance in terms of Performance Task I is indicated by an overall mean of 3.64 and a standard deviation of 0.93, which is interpreted as proficient. This suggests that, on average, students are performing proficiently across all assessed criteria.

In terms of professionalism, most of the respondents got scores of four (4), "Shows professionalism in greeting guests, maintaining appropriate behavior and decorum." with a mean of 3.83 and a standard deviation of 0.89, and were remarked as proficient. Secondly, in terms of attention to detail, most of the respondents got scores of four (4), "Ensures that tables are set and clean before seating guests, paying attention to details that enhance the dining experience." with a mean of 3.65 and a standard deviation of 0.94, and were remarked as proficient. Third, in terms of efficiency and timeliness, most of the respondents got scores of three (3), "Takes orders within a reasonable timeframe but may rush guests or delay taking orders during peak periods, resulting in occasional wait times." with a mean of 3.54 and a standard deviation of 0.99, and were remarked as proficient. Lastly, in terms of accuracy of service, most of the respondents got scores of three (3), "Delivers food and beverage orders with moderate accuracy and timeliness, but may overlook some details or encounter occasional delays." with a mean of 3.53 and a standard deviation of 0.93, and were remarked as proficient.

These results imply that students are consistently proficient across various aspects of their performance tasks, with particular strengths in professionalism. The uniformly proficient ratings suggest a well-rounded competence in performance tasks, indicating effective training and skill development.

The level of students' performance in terms of Performance Task II is indicated by an overall mean of 3.65 and a standard deviation of 0.91, which is interpreted as proficient. This suggests that, on average, students are performing proficiently

across all assessed criteria in their practical test.

In terms of *professionalism*, most of the respondents got scores of three (3), "Demonstrates basic professionalism but may exhibit minor lapses in etiquette or behavior." with a mean of 3.73 and a standard deviation of 0.94, and were remarked as proficient. Secondly, in terms of *attention to detail*, most of the respondents got scores of four (4), "Ensures that tables are set and clean before seating guests, paying attention to details that enhance the dining experience." with a mean of 3.61 and a standard deviation of 0.93, and were remarked as proficient. Third, in terms of *efficiency and timeliness*, most of the respondents got scores of three (3), "Takes orders within a reasonable timeframe but may rush guests or delay taking orders during peak periods, resulting in occasional wait times." with a mean of 3.65 and a standard deviation of 0.86, and were remarked as proficient. Lastly, in terms of *accuracy of service*, most of the respondents got scores of three (3), "Delivers food and beverage orders with moderate accuracy and timeliness, but may overlook some details or encounter occasional delays." with a mean of 3.61 and a standard deviation of 0.92, and were remarked as *proficient*.

This implies that students generally perform at a proficient level across various aspects of their practical tests in food and beverage services. With the highest mean score in professionalism (3.73) and lower, but still proficient, mean scores in attention to detail (3.61), efficiency and timeliness (3.65), and accuracy of service (3.61), it is evident that while students have a solid grasp of basic professional behaviors and skills, there are areas for improvement. Specifically, the minor lapses in etiquette and occasional oversight in details suggest a need for more focused training to elevate their performance from proficient to outstanding. This overall proficiency highlights the effectiveness of the instructional materials but also emphasizes the importance of continual skill refinement to achieve higher standards of excellence in practical service tasks.

The above findings were supported by the study of Salañó (2023) that supplementary instructional material improved student's learning performance.

The level of a student's performance in terms of Performance Task III shows an overall mean of 3.68 and a standard deviation



of 1.03, indicating a verbal interpretation of proficient. This suggests that students performed at a proficient level across all evaluated criteria.

In terms of *professionalism*, most of the respondents got scores of three (3), “Demonstrates basic professionalism but may exhibit minor lapses in etiquette or behavior.” with a mean of 3.74 and a standard deviation of 0.98, and were remarked as proficient. Secondly, in terms of *attention to detail*, most of the respondents got scores of three (3), “Generally maintains a clean and inviting seating area, but may overlook minor details or inconsistencies in table settings.” with a mean of 3.54 and a standard deviation of 0.96, and were remarked as *proficient*. Third, in terms of *efficiency and timeliness*, most of the respondents got scores of five (5), “Takes orders efficiently without rushing guests, ensuring that each guest is given adequate time to review the menu and make selections, minimizing wait times.” with a mean of 3.72 and a standard deviation of 1.07, and was remarked as proficient. Lastly, in terms of *accuracy of service*, most of the respondents got scores of five (5), “Delivers food and beverage orders accurately and promptly, ensuring that each item is served as per the guest's specifications and without errors.” with a mean of 3.73 and a standard deviation of 1.09, and were remarked as proficient.

This implies that while students are generally proficient in key performance areas, there is potential for further improvement. Enhancing attention to detail and maintaining consistent professionalism could elevate their overall competence. Targeted training to address these minor lapses and inconsistencies can help students achieve a higher standard of service quality, ultimately benefiting their professional development and the satisfaction of customers in the Food and Beverage Services sector.

The level of a student's performance in terms of Performance Task IV. The overall mean is 3.76 with a standard deviation of 0.98, indicating a verbal interpretation of proficient. This suggests that students performed at a proficient level across all evaluated criteria.

In terms of *professionalism*, most of the respondents got scores of four (4), “Shows professionalism in greeting guests, maintaining appropriate behavior and decorum.” with a mean of 3.80 and a standard deviation of 0.92, and were remarked as proficient. Secondly, in terms of *attention to detail*, most of the respondents got scores of three (3), “Generally maintains a

clean and inviting seating area, but may overlook minor details or inconsistencies in table settings.” with a mean of 3.75 and a standard deviation of 0.98, and were remarked as proficient. Third, in terms of *efficiency and timeliness*, most of the respondents got scores of five (5), “Takes orders efficiently without rushing guests, ensuring that each guest is given adequate time to review the menu and make selections, minimizing wait times.” with a mean of 3.73 and a standard deviation of 1.04, and was remarked as proficient. Lastly, in terms of *accuracy of service*, most of the respondents got scores of three (3), “Delivers food and beverage orders with moderate accuracy and timeliness, but may overlook some details or encounter occasional delays.” with a mean of 3.74 and a standard deviation of 0.98, and were remarked as proficient.

Test of Significant Effect of Instructional Videos in Food and Beverage Services on the Students’ Participation

The utilization of instructional videos has become increasingly prevalent in educational settings, particularly within vocational and technical courses such as Food and Beverage Services. These visual aids enhance learning by providing clear, practical demonstrations of key concepts and techniques, thereby complementing traditional teaching methods. Understanding the impact of these instructional videos on student participation is crucial for educators aiming to optimize teaching strategies and improve student outcomes. This study investigated the significant effect of instructional videos on students' participation in Food and Beverage Services courses.

The significant effect of instructional videos in food and beverage services on the students’ participation in terms of peer interaction and active engagement were treated statistically using Jamovi using the regression analysis.

Table 14 shows each predictor variable's unstandardized coefficients, standardized coefficients, t-values, and p-values. The analysis included nine predictor variables: objectives, discussion, demonstration, values integration, performance evaluation, visual, sound, pronunciation, and time duration.

In terms of peer interaction, the results further showed that 9.44% of the variance is explained by the nine predictors, $F(9, 90) = 1.04, p.413$. In particular, values integration ($B=1.742, t=2.238, p.030$) negatively affects students’ participation in terms of peer interaction.

Table 14 Significant Effect of Instructional Videos in Food and Beverage Services on the Students’ Participation

<i>Peer Interaction</i>	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	4.160	0.430		9.673	<.001
<i>Objectives</i>	-0.119	0.109	-0.162	-1.093	0.277
<i>Discussion</i>	0.190	0.122	0.236	1.549	0.125
<i>Demonstration</i>	0.099	0.128	0.124	0.771	0.442
<i>Values integration</i>	-0.199	0.087	-0.317	-2.270	0.026
<i>Performance evaluation</i>	0.007	0.124	0.009	0.061	0.951
<i>Visual</i>	-0.097	0.099	-0.138	-0.985	0.327



<i>Sound</i>	-0.016	0.092	-0.024	-0.176	0.860
<i>Pronunciation</i>	0.040	0.127	0.056	0.320	0.749
<i>Time duration</i>	0.152	0.118	0.205	1.283	0.203

R = .307; R² = .0944; Adj. R² = 0.00382, F(9, 90) = 1.04; p.413

Active Engagement

(Constant)	4.503	0.293		15.358	<.001
<i>Objectives</i>	0.108	0.074	0.211	1.458	0.148
<i>Discussion</i>	0.207	0.083	0.368	2.472	0.015
<i>Demonstration</i>	0.007	0.087	0.013	0.084	0.933
<i>Values integration</i>	-0.065	0.059	-0.148	-1.085	0.281
<i>Performance evaluation</i>	-0.096	0.084	-0.176	-1.137	0.259
<i>Visual</i>	-0.122	0.067	-0.247	-1.806	0.074
<i>Sound</i>	-0.011	0.062	-0.025	-0.183	0.855
<i>Pronunciation</i>	-0.034	0.087	-0.067	-0.390	0.697
<i>Time duration</i>	0.068	0.081	0.325	2.083	0.040

R = .371; R² = .138; Adj. R² = 0.0515, F(9, 90) = 1.60; p.128

On the other hand, objectives ($B=-0.162$ $t=-1.093$, $p.277$), discussion ($B=0.236$ $t=1.549$, $p.125$), demonstration ($B=0.124$ $t=0.771$, $p.442$), performance evaluation ($B=0.0091$ $t=0.061$, $p.951$), visual ($B= -0.138$ $t=-0.985$, $p.327$), ($B= -0.024$, $t=-0.176$, $p.860$), pronunciation ($B=0.056$ $t=0.320$, $p.749$) and time duration ($B= 0.205$, $t=1.283$, $p.203$) are not significantly affected the outcome variable.

This implies that the negative impact of instructional videos on students' participation in terms of peer interaction with regards to values integration has implications for overall learning outcomes in food and beverage services education. Reduced peer interaction can limit the exchange of ideas, perspectives, and feedback crucial for holistic learning. Similarly, inadequate values integration may compromise students' ability to apply ethical principles in real-world scenarios, impacting their preparedness for professional roles in the industry.

While in terms of *active engagement*, the results showed that 13.80% of the variance is explained by the nine predictors, $F(9, 90) = 1.60$, $p.128$. Especially, discussion ($B=-0.281=1.916$,

$p.068$) and time duration ($B=-0.086$, $t=0.611$, $p.544$) are positively affected by students' participation in terms of active engagement. On the other hand, objectives ($B=-0.281=1.916$, $p.068$), demonstration ($B=-0.281=1.916$, $p.068$), values integration ($B=1.742$, $t=2.238$, $p.030$) performance evaluation ($B=-0.281=1.916$, $p.068$), visual ($B=-0.281=1.916$, $p.068$), sound ($B=-0.281=1.916$, $p.068$) and pronunciation ($B=-0.281=1.916$, $p.068$) are not significantly affected the outcome variable.

This implies a positive and significant effect of instructional videos on students' participation in class discussions and the duration of their active engagement. Students exposed to instructional videos tend to demonstrate increased involvement, interaction, and sustained attention during learning activities related to food and beverage services.

Another test for the hypothesis is found in Table 14, which discusses the effect of instructional videos in Food and Beverage services on the students' performance in terms of written tests and performance tasks or hands-on activities.

Table 15 Significant Effect of Instructional Videos in Food and Beverage Services on the Students' Performance

<i>Written Test</i>	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	T	
(Constant)	13.084	4.310		3.036	0.003
<i>Objectives</i>	0.681	1.093	0.093	0.623	0.535
<i>Discussion</i>	-0.735	1.232	-0.091	-0.597	0.552
<i>Demonstration</i>	-2.026	1.288	-0.254	-1.573	0.119
<i>Values integration</i>	0.311	0.881	0.046	0.352	0.725
<i>Performance evaluation</i>	-0.553	1.243	-0.071	-0.445	0.658
<i>Visual</i>	1.417	0.993	0.201	1.427	0.157
<i>Sound</i>	0.177	0.925	0.026	0.191	0.849



<i>Pronunciation</i>	1.703	1.280	0.235	1.330	0.047
<i>Time duration</i>	-1.005	1.192	-0.135	-0.844	0.401
R = .292; R ² = .0855; Adj. R ² = -0.00597, F(9, 90) = 0.935; p.499					
Practical Test					
(Constant)	15.933	3.125		5.098	<.001
<i>Objectives</i>	-0.119	0.793	-0.022	-0.150	0.881
<i>Discussion</i>	-0.134	0.893	-0.150	-0.023	0.881
<i>Demonstration</i>	-0.898	0.934	-0.157	-0.961	0.339
<i>Values integration</i>	1.192	0.639	0.265	1.867	0.045
<i>Performance evaluation</i>	-0.288	0.902	-0.051	-0.320	0.749
<i>Visual</i>	-0.643	0.720	-0.127	-0.894	0.374
<i>Sound</i>	0.046	0.670	0.009	0.069	0.944
<i>Pronunciation</i>	-0.342	0.928	-0.066	-0.369	0.713
<i>Time duration</i>	0.963	0.864	0.181	1.115	0.268
R = .258; R ² = .066; Adj. R ² = -0.0270, F(9, 90) = 0.711; p.698					

Table 19 shows each predictor variable's unstandardized coefficients, standardized coefficients, t-values, and p-values. The analysis included nine predictor variables: objectives, discussion, demonstration, values integration, performance evaluation, visual, sound, pronunciation, and time duration.

In terms of the *written test*, the results further showed that 8.55% of the variance is explained by the nine predictors, $F(9, 90) = 0.935, p.499$. In particular, pronunciation ($B=0.056, t=0.320, p.749$) positively affects students' written test performance. On the other hand, objectives ($B=-0.162, t=-1.093, p.277$), discussion ($B=0.236, t=1.549, p.125$), demonstration ($B=0.124, t=0.771, p.442$), values integration ($B=1.742, t=2.238, p.030$), performance evaluation ($B=0.009, t=0.061, p.951$), visual ($B=-0.138, t=-0.985, p.327$), ($B=-0.024, t=-0.176, p.860$), and time duration ($B=0.205, t=1.283, p.203$) are not significantly affected the outcome variable.

This implies that instructional videos in food and beverage services have a positive significant effect on students' performance in written tests, particularly with regard to pronunciation. These videos enhance pronunciation accuracy, phonological awareness, and confidence in speaking skills while reducing pronunciation errors. By providing clear pronunciation models, facilitating self-directed learning, and promoting multisensory learning, instructional videos improve pronunciation performance and overall language proficiency among food and beverage industry students.

In terms of *practical tests*, the results further showed that 6.60% of the variance is explained by the nine predictors, $F(9, 90) = 0.711, p.698$. In particular, values integration ($B=1.742, t=2.238, p.030$) positively affects students' performance in

terms of practical tests. On the other hand, objectives ($B=-0.281, t=-1.916, p.068$), discussion ($B=-0.281, t=-1.916, p.068$), demonstration ($B=-0.281, t=-1.916, p.068$), performance evaluation ($B=-0.281, t=-1.916, p.068$), visual ($B=-0.281, t=-1.916, p.068$), sound ($B=-0.281, t=-1.916, p.068$), pronunciation ($B=-0.281, t=-1.916, p.068$) and time duration ($B=-0.086, t=-0.611, p.544$) are not significantly affected the outcome variable.

This implies that instructional videos in food and beverage services have a positive significant effect on students' performance in practical tests, particularly regarding values integration. These videos cultivate professionalism, ethics, cultural sensitivity, teamwork, customer orientation, sustainability practices, and adaptability, contributing to well-rounded and proficient hospitality professionals. Incorporating values-based content into instructional videos enhances students' holistic development and prepares them for success in the diverse and evolving food and beverage services field. The increasing prevalence of computers, tablets, and cellphones in today's students' lives has opened up new, tailored, and engaging educational experiences. These technological resources claim to improve participation, encourage self-guided learning, and make many instructional resources easily accessible.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings revealed, the following conclusions are drawn:

1. Values integration has a significant effect, implying that when designing instructional materials and activities for Food and Beverage Services education, educators should prioritize the integration of values considering learners' different types and behaviors. At the same time, the majority of the variables, such as objectives, discussion,



demonstration, performance evaluation, visual, sound, pronunciation, and time duration, do not significantly affect the students' participation. Thus, the null hypothesis is accepted.

2. it was also found that value integration significantly affects students' performance tasks, and most variables such as objectives, discussion, demonstration, performance evaluation, visual, sound, pronunciation, and time duration do not. The null hypothesis is, therefore, accepted. This implies that the Integration of values into instructional content emerges as a critical determinant of student success.

Based on the conclusions drawn, the following recommendations are offered:

1. Technical Vocational Livelihood Teachers may prioritize integrating values into instructional video materials and Food and Beverage Services activities. This can be done by ensuring that the integration of values aligns with the broader curriculum objectives and learning outcomes by actively incorporating teamwork, communication, professionalism, and ethical considerations into the curriculum, ensuring that these values are embedded throughout instructional videos and contribute to the holistic development of students.
2. School Heads and TVL Master Teachers are encouraged to work together to develop and implement specialized

instructional materials and fun practice exercises. These educational leaders can build a professional development program that helps TVL Teachers improve their language competence and communication skills, which will enhance the overall learning experience for students by creating a positive and dynamic learning environment.

3. A qualitative approach provides a valuable method to track these developments for future researchers interested in studying changes in students' skills over time in using instructional videos for Food and Beverage Services. Examining the students' progression over time enables researchers to identify patterns, trends, and potential areas for improvement in utilizing instructional videos for teaching Food and Beverage Services.

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THE MEDIATING EFFECT OF GUEST SATISFACTION ON THE RELATIONSHIP BETWEEN SAFETY AND SECURITY AND CUSTOMER RETENTION OF SELECTED INLAND RESORTS IN TAGUM CITY

Marielle Samantha P. Aldeano¹, Abbegail T. Montoro¹, Kimberly M. Capul¹,

Kerby C. Nerosa¹, Justine S. Balo¹, Jill A. Valdez, MBA²

¹St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

ABSTRACT

This study determined the mediating effect of guest satisfaction on the relationship between safety and security and customer retention at selected inland resorts in Tagum City. A descriptive-correlational research design was employed. The respondents of the study were 300 local and non-local tourists at selected inland resorts in Tagum City. Mean, Pearson r, standard deviation, regression analysis, and the Sobel test were used as statistical tools. Findings revealed a significant relationship between safety and security and customer retention, guest satisfaction and customer retention, and safety and security and guest satisfaction. Guest satisfaction mediates the relationship between safety, security, and customer retention among tourists with full mediation. Based on the findings, it highlights the importance of safety and security, customer retention, and guest satisfaction and suggest improving safety and security policies in inland resorts. The development of inland resorts for applying safety and security policies is needed to enhance guest satisfaction and maximize customer retention.

KEYWORDS: *safety and security, customer retention, guest satisfaction, Philippines*

INTRODUCTION

To deliver unique experiences, tourism and hospitality companies are always looking for new methods to include customers in the value-creation cycle (So & Li 2020). According to Rather and Sharma (2017), the rapid advancement of information technology aided the tourism and hospitality industries. Therefore, safety and security, customer retention, service quality, customer satisfaction, and firm engagement were critical in promoting domestic and foreign tourist service providers, such as lodging facilities, dining establishments, travel agents, airlines, and associated vendors (Pascual & Cain, 2021; Steinhoff & Zondag, 2021). However, for the past years, it was reported that there was significantly low customer retention in businesses, which resulted in suspending and/or closing their operations (Alketbi et al., 2020).

In Cavite, Philippines, Mendoza and Espejon (2022) stated that the service sector, particularly the resorts, and hotels, had low guest retention and satisfaction brought about by the COVID-19 pandemic. Furthermore, a recent surfing accident occurrence on Siargao highlighted the island's lack of safety precautions and regulations. Concerns were expressed concerning inexperienced surfing instructors, a lack of lifeguards, poor first aid facilities, and some instructors' casual attitudes. The Department of Tourism was urged to address these concerns and emphasize the safety of tourists visiting Siargao, with the goal of improving overall visitor safety and experience (Santiago, 2018). In the local context, a decline in customer retention occurred after the drowning incident happened in one

of the resorts in Tagum City, Davao del Norte, according to a report by the Police Community Affairs and Development Group, Davao Region. This incident harmed the resort's reputation (Ortonero, 2021).

In the tourism and hospitality, if tourists' expectations were met or exceeded, they were more likely to be satisfied with their stay, which could lead to higher customer retention. Furthermore, Nunkoo et al. (2019) backed up Deng et al.'s (2013) claim that to maintain existing customers, remain competitive, and attract new ones, lodging businesses frequently prioritized customer satisfaction. Thus, the results and findings of this study could be used by the resort's management to improve operational efficiency, develop new customer retention strategies, and implement constructive solutions to address problems relating to retention issues.

OBJECTIVES

1. To determine the level of safety and security in terms of public hazard, life and property, public health, accessibility, and environmental.
2. To ascertain the level of guest satisfaction in terms of facilities, amenities, and customer service.
3. To determine the level of customer retention in inland resorts in Tagum City.
4. To determine the relationship between safety and security and customer retention, guest satisfaction and customer retention, and safety and security and guest satisfaction.



5. To assess if guest satisfaction significantly mediates the relationship between safety and security and customer retention in selected inland resorts in Tagum City.

METHODOLOGY

The research design of this study was quantitative descriptive-correlational. It involves using a survey to collect data which covered the variables that the researchers needed to investigate. Furthermore, mediation analysis was performed to determine the mediating effect of guest satisfaction on the relationship between safety and security and customer retention at selected inland resorts.

This study was conducted at selected inland resorts in Tagum City. There were 300 local and non-local tourists as respondents. The questionnaires were distributed in accordance with permission from the resorts' owners and instructions were given by the assigned gatekeepers.

RESULTS

The level of safety and security was high. This means that it is very evident. This is parallel to the study of Georgieva and Bankova (2021), who emphasized that customer security and safety are top priorities in the global tourism industry. When choosing a resort to stay at, travelers consider security and safety. It is also the first consideration for travelers to be free from dangers and hazards (Torralba & Ylagan, 2021). All five indicators are described as high, which means that the level of safety and security of tourists in inland resorts is manifested at all times. Environmental got the highest mean, followed by Life and Property, then Public Health and Accessibility, and Public Hazard as the lowest.

Moreover, the level of guest satisfaction was high. This means that it is very evident. This confirms the findings of Giroti (2021), who argued that a satisfied customer increases repeat and referral business by being a loyal customer and taking the time to write positive reviews. All three indicators are described as high, which means that the level of guest satisfaction of tourists in inland resorts is manifested at all times. Facilities have the highest mean followed by Customer Service and Amenities as the lowest mean.

In addition, the level of customer retention was high. This means that it is very evident. This is parallel to the study of Buttle (2012), who stated that customer retention is defined as "the process of creating and maintaining long-term relationships with customers by providing superior customer value and satisfaction." It is a comprehensive approach that integrates various aspects of customer experience, including marketing, sales, and customer service. Tourists agree that if they had a positive experience at an inland resort, they are likely to share their experience with others through social media, and word-of-mouth recommendations. Hence, positive feedback from satisfied guests can attract new visitors to the resort while also reinforcing the decision for previous guests to return.

Moreover, the correlation of the two variables, namely, safety and security and customer retention, shows that safety and security have a significant relationship with tourists' customer retention. The p-value of the two variables is less than the 0.05

level of significance, which makes them significantly correlated. This finding is consistent with the notion of Wirtz et al. (2007), who demonstrated that perceived value (including perceptions of safety and security) is an important indicator of customer loyalty in other industries. Similarly, studies discovered that perceived value, including safety and security, was a strong predictor of customer loyalty in the hotel business.

Consequently, the correlation of the two variables, namely, guest satisfaction and customer retention, indicates that the two variables have a significant relationship with each other. The p-value of these two variables is not more than 0.05 level of significance, which makes them significant. On a high note, this finding is consistent with the study of Nunkoo et al. (2019) backing Deng et al. (2013) argument that to maintain existing customers, remain competitive, and attract new ones, lodging businesses frequently prioritize customer satisfaction.

Furthermore, the correlation of the two variables, namely safety and security and guest satisfaction, demonstrates that the two variables have a significant relationship. This means that tourists develop more trust and confidence when they feel that the resort prioritizes safety and security above all else. It means that when visitors feel safe and secure, they are more likely to have pleasant experiences, resulting in higher levels of satisfaction. This finding is consistent with the study by Ali et al. (2021), which found that safety and security significantly impact customer satisfaction in the hospitality industry, and this study also showed that satisfaction and safety and security have a beneficial connection. Thus, customers expect to feel safe and secure when engaging with a service provider, whether it's in a physical environment or online.

In addition, mediation analysis was performed to assess the mediating role of guest satisfaction on the relationship between safety and security and customer retention of selected inland resorts in Tagum City. It was hypothesized that safety and security would positively influence customer retention of tourists. Consequently, it was hypothesized that guest satisfaction would mediate such a relationship. A series of regression analyses were carried out to test the hypotheses.

This proposition aligns with the study of Torralba and Ylagan (2021), which highlights the safety and security of guests would result in guests' satisfaction thereby affecting customer retention. In other words, tourists would be more likely to patronize services if expectations were met. Hence, customer satisfaction is crucial to ensuring customer retention (Bowen & Chen 2001). Moreover, Meyer and Schwager (2007), in a study cited by Torralba and Ylagan (2021), revealed in their research findings that the resort's safety and security affect guest satisfaction.

SUGGESTIONS

After a profound consideration on the possible implications of the findings and conclusion of this study, the researchers recommend the management of inland resorts to organize regular training sessions for personnel on emergency response strategies, including protocols for dealing with various safety and security crises. Also, the inland resort should invest in high-



tech security equipment to ensure guest satisfaction and protect its grounds. This will improve the overall experience and encourage repeat business, ultimately increasing customer retention rates. More so, inland resorts should offer a safe and secure environment, resorts may build trust with their customers, boost their sense of well-being, and increase the likelihood that they will return. Effective safety and security protocols can also help to reduce risks, avoid accidents, and retain the resort's reputation as a reliable tourism destination. Finally, future researchers could conduct studies on the variables examined in the study. They may conduct more studies on safety and security in relation to guest satisfaction, guest satisfaction in relation to customer retention, and safety and security in relation to customer retention. They may also use various procedures, respondents, or designs in a research study.

CONCLUSIONS

Based on the results of the research objectives, the researchers have concluded that the variables of safety and security, guest satisfaction, and customer retention among tourists are high and manifested at all times. This means that the safety and security of guests would result in guests' satisfaction, thereby affecting customer retention (Torralba & Ylagan, 2021). Also, there is a significant relationship between safety and security and customer retention of tourists, guest satisfaction and customer retention of tourists, and safety and security and guest satisfaction. Lastly, guest satisfaction significantly mediates the relationship between safety and security and customer retention among tourists with full mediation.

TABLES AND REFERENCES

Table 1. Summary of the Level of Safety and Security

Table with 4 columns: Indicators, SD, Mean, Descriptive Equivalent. Rows include Public Hazard, Life and Property, Public Health, Accessibility, Environmental, and OVERALL MEAN.

Table 2. Summary of the Level of Guest Satisfaction

Table with 4 columns: Indicators, SD, Mean, Descriptive Equivalent. Rows include Facilities, Amenities, Customer Service, and OVERALL MEAN.

**Table 3. Level of Customer Retention**

Items	SD	Mean	Descriptive Equivalent
If I needed resort services now, this resort would be my first choice.	0.68	4.25	Strongly Agree
I plan to continue my relationship with this resort in the future	0.76	4.18	Agree
I would recommend this resort as the best service provider.	0.82	4.13	Agree
I would encourage friends and relatives to visit this resort.	0.83	4.17	Agree
I have said positive things about this resort to others.	0.80	4.16	Agree
The relationship I have with this resort is important to me.	0.83	4.06	Agree
I consider this resort as my first choice.	0.74	4.14	Agree
Category Mean	0.78	4.16	Agree

Table 4. Significance of the Relationship Among Safety and Security, Customer Retention and Guest Satisfaction

Variables Correlated	r-values	p-values	Remarks
Safety and Security and Customer Retention	0.604	.000	Significant
Guest Satisfaction and Customer Retention	0.734	.000	Significant
Safety and Security and Guest Satisfaction	0.782	.000	Significant
Strong Positive Correlation (0.60-0.79)		Very Strong Positive Correlation (0.80 -1.0)	

Table 5 Steps in Mediation Analysis

Independent Variable	Safety and Security
Dependent Variable	Customer Retention
Mediating Variable	Guest Satisfaction
Step 1. Path C (IV and DV)	
Unstandardized Beta (B)	.575
Standard Error (e)	.044
p-value	.000
Step 2. Path B (MV and DV)	
Unstandardized Beta (B)	.740
Standard Error (e)	.040
p-value	.000
Step 3. Path A (IV and MV)	
Unstandardized Beta (B)	.738
Standard Error (e)	.034
p-value	.000



Step 4. Combined Influence of IV and MV on DV

Guest Satisfaction

Unstandardized Beta (B)	.680
Standard Error (e)	.064
Standardized Beta	.674
Part Correlation	.420

Safety and Security

Standardized Beta	.077
Part Correlation	.048
Total R-square	.541

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FEMALE LITERACY STATUS: URBAN COMMUNITIES IN ANDHRA PRADESH

Ramineni Nagamani

Lecturer in Political science, BSSB Degree College, Tadikonda-522236, AP, India

ABSTRACT

Women Education in India has also been a major preoccupation of both the government and civil society as educated women can play a very important role in the development of the country. Education is milestone of women empowerment because it responds to the challenges, to confront their traditional role and change their life. The low level of literacy within the schedule communities in traditionally explained in the terms of the conservative value characterizing urban slums society. My present study based on a field survey of slum dwellers in Visakhapatnam city and this article argues that economic factors causes for low levels of literacy create in urban slums communities in the vizag city of Andhra Pradesh.

KEYWORDS: Community, Dropouts, Empowerment, Literacy

1. INTRODUCTION

The largest proportion of world population increases will occur in third world war countries and will be concentrated in already over burdened metropolitan areas. In 1980s out of the 5 cities with 5.0 million populations the share for developing countries was only one. In 1984 it was 22 out of 34 and by the year 2025 it would be 50 out of possible 93. Such a rapid growth may also cause breakdown of system and creates chaos. The city of the Calcutta, India along with Mexico and Lagos is already suffering from sprawling slums, traffic jam and shortage of water, education and schools, health and recreational facilities. Urban demographers predict that by the end of the century half of the world's population will be urban and one-fifths of this population will concentrated in mega cities of population of four millions plus. International migration will play a significant role, and contrary to the traditional model of urban growth, much of it will take places in third world war countries. Irrespective of the present of present levels, experts estimates that by the year 2025 urbanization levels will be 74 percent for developing countries and 77 percent of developed countries.

Another possible reason for the high opportunity cost of education is that children may have to perform household duties. Among such chores are supervising sibling (especially during child-bearing by their mother), helping in cooking, washing clothes and utensils, marketing, etc. In the absence of extended families, it may be not being possible for the mother to perform these entire tasks herself especially if she has to work. In such cases children have to supplement the labour provided by their mother in these tasks. This may prevent them from joining school or attending school on regular basis.

Slums have grown simultaneously with the growth of towns and cities partially in large industrial cities prohibition of slums has been taking place whenever the urban resources are stretched

by intense population pressure. Industries in all major town land cities have attracted a sizable number of people from rural areas who were reeling under the pressure of poverty there by leading to proliferation of slum at a faster rate. Such people who came to the cities in search of livelihood settled themselves in vacant places, due to lack of any basic civic amenities and these areas have soon grown into slums where people live under unhygienic and insanitary conditions in India slums population has been growing at an alarming rate it.

Latest National sample Survey Organization report shows that the number of slum households in urban areas is coming down. The survey, conducted between July and December 2012, projected total slum dwellings at 88 lakh, compared to 1.3 crore households in 2011. 88 lakh households live in urban slums Share of states: Maharashtra (38%), Andhra Pradesh (18%) Andhra Pradesh has the highest number of slum households in terms of percentage, with 35.7% of its urban population living in slums, while Kerala has the lowest with only 1.5%. According to the data, Visakhapatnam, Jabalpur, Mumbai, Vijayawada and Meeruthavemore than 40% slum households. The census describes slums as "residential areas where dwelling are fit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of the factors which are detrimental to the poverty and literacy rate in female schedule caste in Andhra Pradesh.

2. SCOPE OF THE STUDY

Greater Visakhapatnam Municipal Corporation is characterized by a very significant presence of the urban poor, with a growing poverty profile. Slum settlements have multiplied overcrowded the living conditions of the poor have not improved. Environmental decline, vehicular pollution, inadequate basic



services and infrastructure in the poor settlements hit the poor hardest. Slums are scattered across the city and surrounding areas, with high population densities and the number of people inhabiting them estimated to be around 342658. It is estimated that more than half of these slums are on GVMC and Govt lands, and the rest on lands belonging to various public entities. Poverty has a visible gender dimension too. The incidence of poverty among women is higher and female-headed households constitute the poorest of poor. The poor, not only habitat in slums of GVMC area but are spread in squatter and informal settlements in small groups deprived of basic services

This makes the more vulnerable to vagaries of nature and threat of eviction. At present there are 472 slums and the slum population is over 6 lakhs. A major problem is the incorporation of 32 villages around Visakhapatnam in the GVMC. Almost all these villages are inhabited by poor and the infrastructure is very low. These are as should be taken as 'poor areas' and special programmes need to be initiated to develop them on par with the city.

3. MAJOR OBJECTIVES OF THE STUDY

- Trace out the economic condition of scheduled caste communities
- Relation between educational and Infrastructural facilities in slums
- Trace out the educational status of selective slums
- Policies and suggestions.

4. DESCRIPTION OF THE STUDY AREA

A. Demography

Visakhapatnam has experienced high growth in population and the same trend is expected to continue over the next two Decades. It is projected that by 2021 Visakhapatnam would emerge as one of the major cities in the country. Most of this growth would take place in Greater Visakhapatnam area away from the city core. However, this has serious implications for service delivery both for city core as well as peripheral areas since the traffic and population flows occur between them. This calls for integrated planning of Greater Visakhapatnam with a focus on equitable provision of services to all the areas and all the sections of the population.

B. Literacy

Population of Visakhapatnam in 2011 is 1,730,320; of which male and female are 875,199 and 855,121 respectively. Although Visakhapatnam city has population of 1,730,320; its urban / metropolitan population is 0 of which 0 are males and 0 are females. Male literacy in the agglomeration is approximately 83.46%, while female literacy is considerably lower at 69.59%.

In education section, total literates in Visakhapatnam city are 1,298,896 of which 698,959 are males while 599,937 are females. Average literacy rate of Visakhapatnam city is 82.66 percent of which male and female literacy was 88.02 and 77.18 percent. Total children (0-6) in Visakhapatnam city are 158,924 as per figure from Census India report on 2011. There were 81,119 boys while 77,805 are girls. The child forms 9.18% of total population of Visakhapatnam City.

C. Communities

Slum population in GVMC is heterogeneous in character - with Hindus, Muslims and Christians having migrated from different neighboring villages, Languages predominantly spoken in slums in Greater Visakhapatnam Municipal Corporation are Telugu and Oriya

D, Land Holdings

Slums in GVMC are located on GVMC, Govt lands, Railway, Port, Endowment, private lands as given in figure 5.1. Government of Andhra Pradesh classified all the slums on government land into objectionable and unobjectionable. Categorization as "objectionable" was based on location and land use - location on riverbeds, low lying areas, drains, road margins, etc. In case of surrounding areas, they were the small and scattered villages inhabited by the poor; particularly the labour from the industrial areas. They suffer from worse deprivations in terms of physical and social amenities as well as sustainable livelihoods.

Table-1 particular of selective slums

Table 1 shows the total number of population and total major percentage of population living in this three slums and shows the literacy status of the particular slums.

Name of the Slum	Type of the slum	Land owned by	Total no of population	Total households	Ward	Total no of SCs pop	Litracy rate in SCs%
Ambetker new colony	Notified	State Government	320	71	1	247	2%
Pedagadhili s.c colony	Non-Notified	State Government	1350	300	3	800	5%
Arava Mala peta	Notified	Private	862	113	18	509	3%

Source: Greater Visakha Municipal Corporation UCD section primary data information.

Ambetker new colony, Pedagadhili s.c colony and Arava Mala peta. For general study of the social structure.



5. METHODOLOGY

In this paper we collect the data from both primary and secondary also we used for the secondary data collect their views and journals. For primary data we used general questionnaire and group discussions with selective slums peoples survey collect from three selective slums with purposive sampling technique primary data from the head of the households Total 75 households has been selected from different slums 25 each from near educational institute located area slum, industrial area slum and commercial area slums. In this study we analyze the data with table and present scenario of scheduled caste female literacy levels in Visakhapatnam slums.

6. REVIEWS

History of Women Education in India although in the Vedic period women had access to education in India, they had gradually lost this right. However, in the British period there was revival of interest in women education in India. During this period, various socio-religious movements led by eminent persons like Raja Ram Mohan Roy, Eswar Chandra Vidyasagar emphasized on women's education in India. Mahatma Jyotiba Phule, Periyar and Baba Saheb Ambedkar were leaders of the lower castes in India who took various initiatives to make education available to the women of India. However women's education got a fillip after the country got independence in 1947 and the government has taken various measures to provide education all Indian women. As a result women's literacy rate has grown over the three decades and the growth of female literacy has in fact been higher than that of male literacy rate. While in 1971 only 22% of Indian women were literate, by the end of 2001 54.16% female were literate. The growth of female literacy rate is 14.87% as compared to 11.72% of that of male literacy.

National Sample Survey data to examine the wage gap between higher castes and the scheduled castes/tribes in the regular salaried urban labour market. The main conclusions we draw are (a) discrimination causes 15 percent lower wages for SC/STs as compared to equally qualified others; (b) SC/ST workers are discriminated against both in the public and private sectors, but the discrimination effect is much larger in the private sector; (c) discrimination accounts for a large part of the gross earnings difference between the two social groups in the regular salaried urban labour market, with occupational discrimination - unequal access to jobs - being considerably more important than wage discrimination - unequal pay in the same job; and (d) the endowment difference is larger than the discrimination component.

Vani K Boorooah The root of the problem of poor Dalit achievement in India lies in the many dysfunctional primary and secondary schools in the villages and towns. Affirmative action policies, which are implemented to boost a deprived group's employment rate, suffer from several defects; in particular, they have only a small effect when the group's educational base is low. Social exclusion robs people of their "confidence" and this loss adversely affects their capacity to function.

Gender disparities in education persist with far more girls than boys failing to complete primary school. The national literacy rate of girls over seven years is 54% against 75% for boys. In the Northern Hindi-speaking states of India, girls' literacy rates are particularly low, ranging between 33–50%. While the enrolment rate is high in urban areas, it is conspicuously low in rural areas and amongst the slum and Minority communities. The disparity is also regional with a higher literacy rate across the Southern and North-Eastern states, but very low in some of the most densely populated northern states. In Uttar Pradesh, the most populated state in India with a population of 172 million (larger than Brazil, which ranks the fourth most populated country in the world), on average, only one out of four girls is enrolled in the upper primary school. Amongst the marginalized communities in the state of Bihar, the situation is far worse where only one out of every six girls is literate. The national average shows that there are twice as many illiterate women as there are men (UNICEF, 2007).

The historical socio-economic and political conditions of Saudi Arabia are an essential aspect of understanding woman's position in Saudi society. The persistence of women's exclusion from public life in contemporary Saudi Arabia is one of the most heated debates not only among Muslims but also worldwide, as Saudi society comes under more and more scrutiny internationally. In 1980, there were more female graduates in the humanities than male. University women could study most of the same subjects as their male counterparts which might lead to the immixing with men. This paper explores some of the restraints and Achievements of women.

7. FINDINGS OF THE STUDY

Studies of inequalities in educational opportunity between different socio-economic classes emerged as an important research issue. Alternative explanations were offered to explain socio-cultural differences in educational choices. Such explanations have been categorized. These explanations suggest two alternative hypotheses to explain the educational

Backwardness of SC communities.

- Different social classes have different value systems that influence their attitude towards the benefits of education
- The social position theory was developed in reaction to the value theory. This theory argues that members of different social classes have to travel different social Distances to attain the same educational level. This explanation focuses on the different costs and benefits of education faced by different social classes.
- In addition to the different cost-benefit ratio of education. The social backgrounds of the families generate varied differences in social opportunities. Children of a particular social class may have to learn values and skills inconsistent with their family backgrounds.

8. CONCLUSION

- The numbers reflect both India's rapid urbanization as well as the movement of people to cities in search of better



livelihoods a migration that doesn't always work to the advantage of city planners who can't build infrastructure fast enough to meet the demands of a rising population or the migrants themselves, many of whom end up living in shanty towns.

- The common explanation offered for the low educational attainment of scheduled cast is in terms of the value system characterizing scheduled cast society. The conservative attitude of scheduled caste parents.
- Prevalence of early marriage, reluctance to send daughters to school and a preference for religious education leading to dependence on scheduled cast communities have been identified as important factors in this context .In addition, the focus on educating daughters to become good mothers and husbands, their
- Segregation from boys after puberty, early marriage, costs of dowry, and realization that benefits from education will accrue, and to the matrimonial home creates a gender bias.
- Economic growth needs to be followed with progress on family health and female education, to achieve the millennium development goals (MDGs) by 2015. In order to ensure that public money is spent properly, civil society groups and local communities will be required to play a larger and a more meaningful role. The following are some policy suggestions to improve the female literacy status of urban slums.

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PREVALENCE AND RISK FACTORS OF DENTAL CARIES AMONG CHILDREN IN URBAN SLUM AREAS OF JODHPUR

Dr. Prem Vishwakarma¹, Dr. Zafar Ejaz Khan², Dr. Sadakat Bashir³

¹MPH Scholar, Dept. of Public Health, Maulana Azad University, Jodhpur

²Assistant Professor, Dept. of Public Health, Maulana Azad University, Jodhpur

³Assistant Professor, Dept. of Public Health, Maulana Azad University, Jodhpur

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ABSTRACT

Objective: This study aimed to determine the prevalence and identify the risk factors of dental caries among children living in urban slum areas of Jodhpur. Given the potential to significantly improve the health of this population, understanding these factors is crucial for developing effective public health strategies.

Methods: A cross-sectional survey was conducted among 392 children from various urban slums in Jodhpur. Data were collected through structured interviews and questionnaires focusing on demographic factors, oral hygiene practices, dietary habits, access to dental care, and the prevalence of dental caries.

Results: The prevalence of dental caries among the children surveyed was 55.1%, with the highest incidence observed in children aged 8 years (15.31%). The gender distribution showed that 54.34% of the respondents were female and 45.66% were male. Monthly household income was a significant factor, with the majority of families earning between INR 5000-10000 (39.29%) and less than INR 5000 (30.36%).

The majority of children (60.46%) had never visited a dental clinic or hospital, primarily due to the high cost of treatment (38.78%). Among those who sought care, 89.54% visited government hospitals, while 10.46% relied on unorganized dental practitioners. Dietary habits also played a crucial role, with 38.52% of children consuming sugary snacks occasionally (3-4 times a week), and 38.52% consuming sugary drinks with the same frequency. Alarming, 70.15% of the children never brushed their teeth, highlighting a critical area for intervention.

Conclusion: The findings indicate a high prevalence of dental caries among children in urban slums of Jodhpur, exacerbated by poor oral hygiene practices, high sugar consumption, and limited access to dental care. The socioeconomic status of the families further contributes to the barriers in obtaining adequate dental health services. These results underscore the need for targeted public health initiatives focusing on improving oral hygiene education, enhancing access to affordable dental care, and addressing dietary habits within these vulnerable communities.

KEYWORDS : Dental Caries, Oral Health, Public Health, Pediatric Dentistry, Oral Hygiene

INTRODUCTION

Dental caries, commonly referred to as tooth decay, is a major public health challenge worldwide, particularly among children. It is the most prevalent chronic disease in children, affecting their quality of life, development, and overall health. Despite being largely preventable, dental caries continues to be a significant concern, especially in low-income populations such as those residing in urban slums. The rapid urbanization in developing countries like India has led to the growth of urban slums, where living conditions are often characterized by overcrowding, poor sanitation, inadequate access to healthcare, and limited educational opportunities. These factors collectively contribute to a higher prevalence of dental caries among children living in these marginalized communities.

The city of Jodhpur, located in the state of Rajasthan, India, is no exception to these challenges. Jodhpur has witnessed significant urban growth, resulting in the expansion of slum areas where a large proportion of the population resides. The

children in these urban slums are particularly vulnerable to dental caries due to several interrelated factors. These include poor oral hygiene practices, a diet high in sugars and refined carbohydrates, lack of access to dental care, and low socioeconomic status. Understanding the prevalence and risk factors of dental caries in this population is essential for developing targeted public health interventions aimed at improving oral health outcomes.

Global and National Context of Dental Caries

Dental caries is a multifactorial disease that results from the interaction between dietary sugars, dental plaque, and the tooth surface over time. The World Health Organization (WHO) has identified dental caries as a major health concern, noting that untreated caries in primary and permanent teeth affects more than 530 million children globally. In India, the prevalence of dental caries among children is alarmingly high, with studies reporting rates ranging from 50% to 80% in various regions. The burden of dental caries is disproportionately higher among



children from lower socioeconomic backgrounds, including those living in urban slums.

Urban slums are characterized by poor infrastructure, inadequate housing, limited access to clean water, and a lack of basic health services. These conditions create an environment conducive to the development of dental caries. The lack of awareness about oral health, coupled with the unavailability of affordable dental care, exacerbates the problem. Additionally, the high cost of dental treatment in private clinics makes it inaccessible to the majority of slum dwellers, forcing them to rely on unorganized and often unlicensed dental practitioners or delay seeking care until the condition becomes severe.

Socioeconomic and Environmental Determinants

The socioeconomic determinants of health play a critical role in the prevalence of dental caries. Children in urban slums are often exposed to poor dietary habits, including the frequent consumption of sugary snacks and beverages, which are readily available and affordable. These dietary choices are influenced by economic constraints, as healthier food options are often more expensive and less accessible. Moreover, the crowded living conditions in slums make it difficult for families to maintain proper hygiene practices, including regular tooth brushing.

Oral hygiene practices are a significant factor in the development of dental caries. However, in urban slum settings, the use of fluoride toothpaste and regular brushing are not always feasible due to financial limitations. Many families in these areas may not prioritize oral hygiene due to a lack of education and awareness about its importance. This is compounded by the fact that many slum residents do not have access to safe and clean water, which is essential for maintaining oral hygiene.

Access to dental care is another critical determinant of oral health in slum populations. Government hospitals and public health facilities are often the only option for those seeking dental care in urban slums. However, these facilities are frequently overburdened, under-resourced, and may not provide specialized pediatric dental services. The reliance on government hospitals is evident in the high percentage of children in Jodhpur's slums who seek care at these facilities. Additionally, some families resort to unlicensed dental practitioners due to the lower cost, despite the potential risks associated with substandard care.

Need for Research and Public Health Interventions

Despite the high burden of dental caries among children in urban slums, there is a paucity of research focused on understanding the specific risk factors and the extent of the problem in these communities. Most studies on dental caries in India have concentrated on general populations or school-going children from more affluent backgrounds, leaving a significant gap in the literature regarding the oral health of children in slum areas. Addressing this gap is crucial for developing effective public health strategies that cater to the unique needs of these vulnerable populations.

Public health interventions aimed at reducing the prevalence of dental caries in urban slums must be multifaceted, addressing both the immediate needs for treatment and the underlying social determinants of health. Education and awareness campaigns are essential for promoting good oral hygiene practices and reducing the consumption of sugary foods and beverages. Additionally, increasing access to affordable dental care through mobile clinics, community health workers, and partnerships with non-governmental organizations can help to alleviate the burden of dental caries in these communities.

REVIEW OF LITERATURE

Some of the relevant review of literature are listed below to gain some insight regarding the dental caries.

The study by **Kassebaum et al. (2017)** provides a comprehensive analysis of the global burden of oral conditions, particularly dental caries, using data from the Global Burden of Disease Study 2015. It highlights that dental caries remains one of the most prevalent chronic diseases worldwide, affecting billions of people, especially in low- and middle-income countries. The study underscores that despite advancements in dental care, the prevalence of untreated caries in both primary and permanent teeth remains high, leading to significant disability-adjusted life years (DALYs). The authors emphasize the need for global public health strategies to address this persistent issue, particularly in disadvantaged regions where access to dental care is limited. The study calls for greater emphasis on preventive measures, education, and improving access to dental services as key strategies to reduce the global burden of dental caries.

Schwendicke et al. (2015) conducted a systematic review and meta-analysis to explore the relationship between socioeconomic status (SES) and the prevalence of dental caries. The study analyzed data from multiple countries and found a strong inverse relationship between SES and dental caries, with lower SES populations exhibiting higher caries prevalence. The authors attribute this to several factors, including limited access to dental care, poor oral hygiene practices, and dietary habits characterized by high sugar consumption. The review highlights that children from low-SES backgrounds are particularly vulnerable to caries, with socioeconomic disparities contributing significantly to their oral health outcomes. The study underscores the importance of addressing these social determinants through targeted public health interventions, such as improving access to dental care, enhancing oral health education, and promoting healthy dietary habits to reduce the incidence of dental caries in lower socioeconomic groups.

Tinanoff et al. (2019) provide an in-depth review of early childhood caries (ECC), discussing its epidemiology, etiology, risk factors, and societal burden. The study highlights that ECC is a significant public health issue, particularly in low-income and disadvantaged populations where the prevalence is notably higher. The authors explore the complex interplay of factors leading to ECC, including frequent exposure to sugary foods and beverages, poor oral hygiene, and inadequate access to preventive dental care. The review also emphasizes the long-term consequences of ECC, which can lead to pain, infection, and difficulties in eating and speaking, potentially impacting a



child's overall development. The authors call for comprehensive public health strategies that include early interventions, parental education, and community-based programs to prevent ECC and mitigate its impact on vulnerable populations.

Marinho (2014) reviews the effectiveness of fluoride therapies in preventing dental caries, drawing from a series of Cochrane reviews on randomized trials. The study consolidates evidence that fluoride, in various forms such as toothpaste, varnish, and water fluoridation, is highly effective in reducing the incidence of dental caries across different age groups and populations. The review highlights that fluoride strengthens tooth enamel and makes it more resistant to acid attacks from plaque bacteria and sugars. It also discusses the cost-effectiveness of fluoride as a preventive measure, particularly in public health programs aimed at reducing caries in children. Marinho concludes that the widespread use of fluoride is a crucial component of caries prevention strategies, especially in communities with high caries prevalence and limited access to other forms of dental care.

Moynihan and Kelly (2014) conducted a systematic review to evaluate the effect of restricting sugar intake on dental caries, in line with the World Health Organization's guidelines. The study confirms a strong positive relationship between sugar consumption and the development of dental caries, with higher sugar intake leading to increased caries risk. The authors emphasize that reducing free sugars to less than 10% of total energy intake significantly lowers the risk of caries, particularly in children. The review also discusses the challenges of implementing dietary changes, especially in populations where sugary foods and beverages are highly accessible and affordable. The authors advocate for public health policies that promote healthier eating habits, such as reducing sugar content in processed foods, implementing sugar taxes, and enhancing public awareness about the risks of high sugar consumption.

Petersen and Ogawa (2012) review the disparities in dental caries prevalence between urban and rural populations, with a focus on the role of fluoride in prevention. The study finds that rural populations often have higher caries rates due to lower access to fluoride and dental care services. In contrast, urban populations may have better access to fluoride through public water systems and dental products, but face higher exposure to dietary sugars and processed foods. The authors highlight the importance of integrating fluoride use into broader public health strategies, particularly in rural areas where dental care infrastructure is lacking. The review also calls for increased efforts to address the social and environmental determinants of health that contribute to the observed disparities, emphasizing the need for tailored public health interventions that consider the unique challenges of both urban and rural populations.

Watt and Sheiham (2012) propose the integration of the common risk factor approach into a social determinants framework to address dental caries and other non-communicable diseases. The study argues that many risk factors for dental caries, such as poor diet, tobacco use, and inadequate hygiene, are common to other chronic diseases, making an integrated approach more effective. The authors

advocate for public health interventions that target these shared risk factors, particularly in disadvantaged communities where the burden of disease is highest. They emphasize the need for policies that promote healthier environments, such as reducing sugar content in foods, regulating tobacco, and improving access to oral health education and care. The review highlights the potential for significant public health gains through the adoption of this holistic approach, which addresses the root causes of poor oral health and other related conditions.

OBJECTIVES OF THE STUDY

This study aims to determine the prevalence of dental caries among children in urban slum areas of Jodhpur and to identify the key risk factors contributing to this condition. By understanding the socioeconomic, dietary, and hygiene-related factors that influence the development of dental caries, this research seeks to inform the design and implementation of targeted public health interventions. Ultimately, the goal is to improve oral health outcomes and reduce the incidence of dental caries among children in these marginalized communities.

This paper will contribute to the growing body of knowledge on the oral health challenges faced by children in urban slums and highlight the urgent need for comprehensive, community-based approaches to address this pressing public health issue.

RESULT AND DISCUSSION

This section presents the study's findings on the prevalence and risk factors of dental caries among children in urban slum areas of Jodhpur. The results are discussed about the study objectives.

Table 1

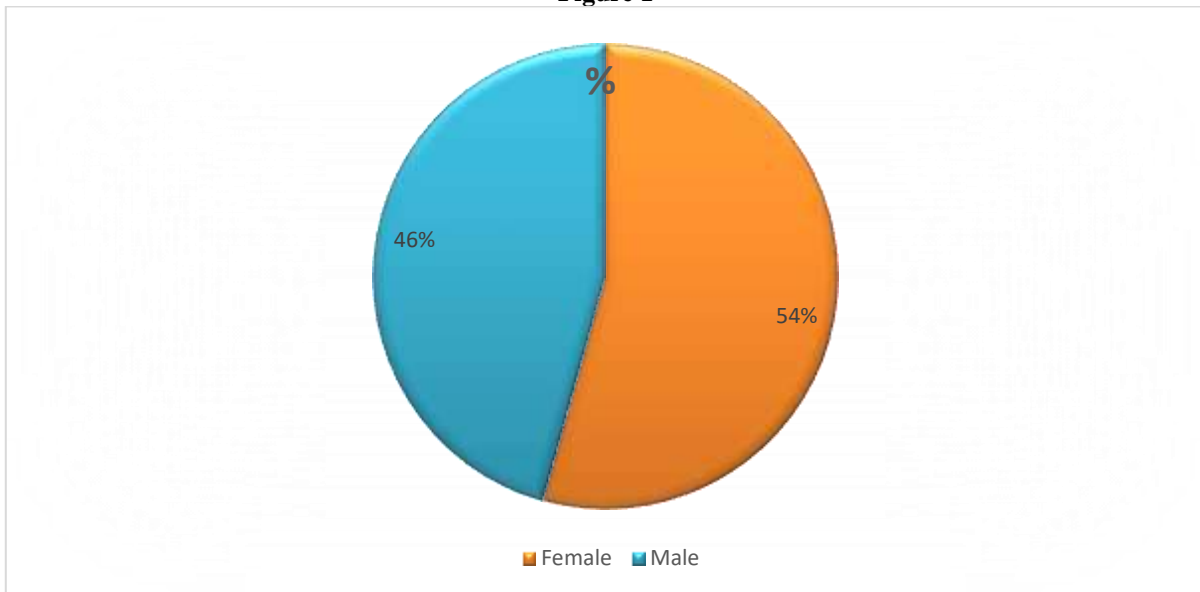
Age	Frequency	Percentage
8	60	15.31
5	55	14.03
11	54	13.78
12	50	12.76
7	49	12.50
10	43	10.97
6	42	10.71
9	39	9.95
Total	392	100

This table presents the age distribution of 392 children who participated in the study. The most represented age group is 8-year-olds, accounting for 15.31% of the total sample. Following closely are 5-year-olds (14.03%) and 11-year-olds (13.78%). The least represented age group is 9-year-olds, making up 9.95% of the sample. This distribution reflects a balanced representation of children across various ages, which is crucial for analyzing how dental caries prevalence and risk factors vary across different developmental stages. The spread of age groups also ensures that the study can make more generalized conclusions applicable to a wider range of children within the urban slum population.

Table 2

Gender	Frequency	Percentage
Female	213	54.34
Male	179	45.66
Total	392	100

Figure 1



This table details the gender distribution of the children surveyed. Out of the 392 participants, 54.34% are female (213 individuals), and 45.66% are male (179 individuals). This slight predominance of females over males in the sample ensures that both genders are adequately represented, allowing the study to explore potential gender-based differences in the prevalence and risk factors for dental caries. A balanced gender distribution is important to ensure that the findings are not biased towards one gender, thereby increasing the generalizability of the study's results.

Table 3

Monthly Household Income	Frequency	Percentage
5000 - 10000	154	39.29
Less than 5000	119	30.36
10000 - 15000	77	19.64
More than 15000	42	10.71
Total	392	100

The third table shows the distribution of monthly household income among the families of the children. The majority of families (39.29%) earn between INR 5000 and 10000 per month, while 30.36% earn less than INR 5000. A smaller portion of the sample falls into the higher income brackets, with 19.64% earning between INR 10000 and 15000, and 10.71% earning more than INR 15000. This income distribution highlights the economic challenges faced by the families living in urban slums, with a significant proportion of the population falling within lower income brackets. This socioeconomic data is critical for understanding the broader context in which these families live and how it might affect their access to dental care and their children's oral health.

Table 4

Has Dental Caries	Frequency	Percentage
Yes	216	55.10
No	176	44.90
Total	392	100

This table outlines the prevalence of dental caries among the children surveyed. Over half of the children (55.10%) have experienced dental caries, while 44.90% have not. This high

prevalence rate underscores the significant public health issue posed by dental caries in urban slum areas. The data suggests that more than half of the children in these areas suffer from tooth decay, highlighting the need for targeted interventions to improve oral hygiene practices, dietary habits, and access to dental care within these communities.

Table 5

Age of First Tooth Decay	Frequency	Percentage
9	31	7.91
11	30	7.65
10	29	7.40
5	27	6.89
7	27	6.89
4	25	6.38
6	24	6.12
8	23	5.87
Total	392	100

The fifth table presents the age at which children first experienced tooth decay. The data shows that tooth decay commonly begins at around 9 years of age, with 7.91% of children reporting their first decay at this age. The frequency remains high for ages 11 (7.65%) and 10 (7.40%). However, tooth decay is also reported in younger children, with 6.89% first experiencing decay at age 5. This early onset of dental caries suggests that interventions to prevent tooth decay need to start at a very young age, possibly even before children enter school.

Table 6

Visited Dental Clinic/Hospital	Frequency	Percentage
No	237	60.46
Yes	155	39.54
Total	392	100

This table shows whether the children had ever visited a dental clinic or hospital for their dental issues. A significant 60.46% of children had never visited a dental clinic or hospital, while 39.54% had. This high percentage of children who have never received professional dental care is alarming and indicates a

substantial gap in access to dental services. The data suggests that many children in urban slums are not receiving the dental care they need, likely due to financial constraints, lack of access, or other barriers, which may contribute to the high prevalence of untreated dental caries.

Table 7

Reason for Not Visiting Clinic	Frequency	Percentage
Visited	155	39.54
High cost	152	38.78
Distance	35	8.93
Lack of time	29	7.40
Other	21	5.36
Total	392	100

This table explores the reasons given by parents for not taking their children to a dental clinic. Among the children who did not visit a clinic, 38.78% cited high cost as the main reason, followed by distance (8.93%) and lack of time (7.40%). The “nan” category, representing 39.54%, corresponds to children who had visited a clinic, so no reason was recorded for them. These findings highlight the financial barriers that prevent families from accessing dental care, suggesting that affordability is a major issue in these communities. This information is crucial for policymakers to consider when designing interventions to improve access to dental services.

Figure 2

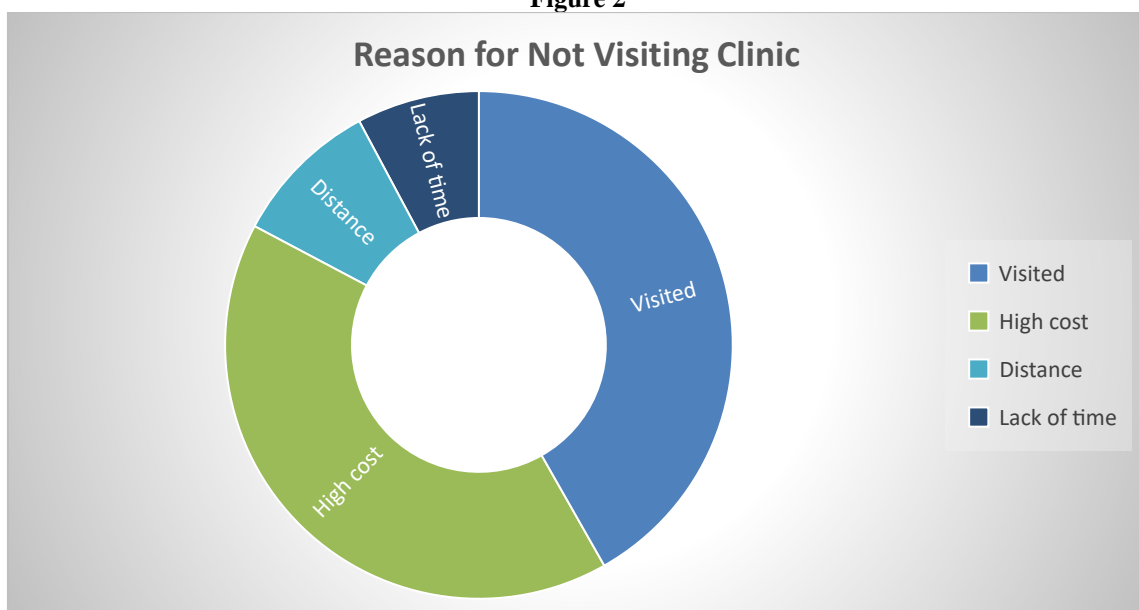


Table 8

Usual Place of Care	Frequency	Percentage
Government Hospital	351	89.54
Unorganized Dental Practitioner	41	10.46
Total	392	100

The eighth table identifies where children typically receive care for dental issues. An overwhelming majority (89.54%) of children receive care at government hospitals, while 10.46% visit unorganized dental practitioners. The reliance on government hospitals reflects the limited financial resources of these families, who may not be able to afford private dental care. However, the fact that some families resort to unorganized practitioners raises concerns about the quality and safety of the care their children receive. This finding underscores the importance of improving the availability and quality of public dental services in urban slums.

Table 9

Sugary Snacks Consumption	Frequency	Percentage
Occasionally (3-4 times a week)	151	38.52
Rarely (1-2 times a week)	119	30.36
Frequently (5+ times a week)	75	19.13
Never	47	11.99
Total	392	100

This table provides insight into the frequency of sugary snack consumption among the children. A significant portion (38.52%) consumes sugary snacks occasionally (3-4 times a week), while 30.36% do so rarely (1-2 times a week). A smaller percentage consumes sugary snacks frequently (19.13%), and 11.99% never consume them. The high frequency of sugary snack consumption is a known risk factor for dental caries, and these findings suggest that dietary habits are likely contributing to the high prevalence of tooth decay in this population. This data highlights the need for dietary interventions aimed at reducing sugar intake among children in urban slums.

Table 10

Sugary Drinks Consumption	Frequency	Percentage
Occasionally (3-4 times a week)	151	38.52
Rarely (1-2 times a week)	137	34.95
Never	55	14.03
Frequently (5+ times a week)	49	12.50
Total	392	100.00

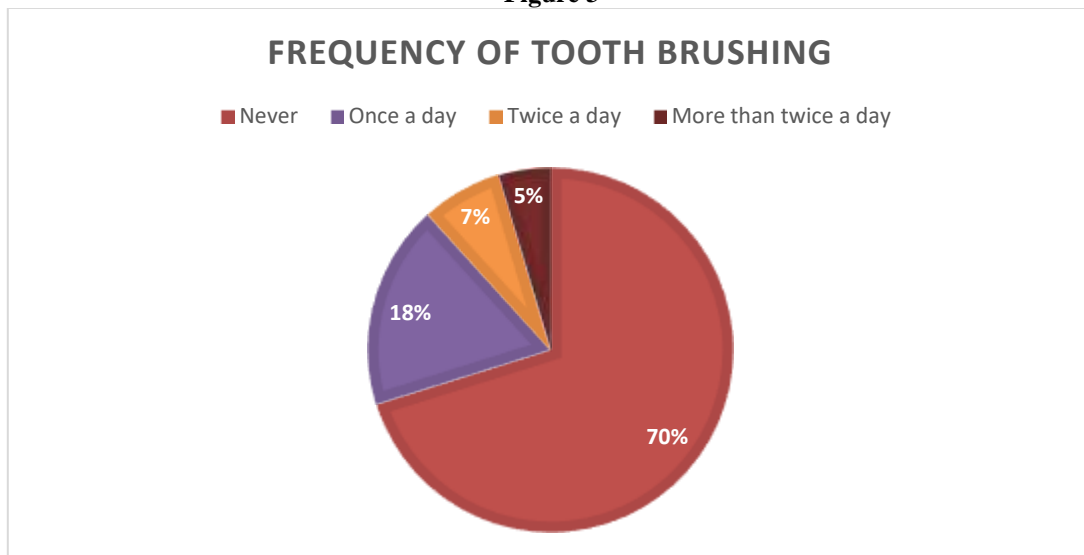
The tenth table examines the consumption of sugary drinks among the children. The data shows that 38.52% of children consume sugary drinks occasionally (3-4 times a week), and 34.95% consume them rarely (1-2 times a week). A smaller percentage (12.50%) consumes sugary drinks frequently, while 14.03% never consume them. Similar to sugary snacks, the frequent consumption of sugary drinks is a significant risk factor for dental caries. These findings suggest that reducing the intake of sugary drinks should be a key component of efforts to prevent dental caries in these communities.

Table 11

Frequency of Tooth Brushing	Frequency	Percentage
Never	275	70.15
Once a day	71	18.11
Twice a day	28	7.14
More than twice a day	18	4.59
Total	392	100

The final table presents data on the frequency of tooth brushing among the children. Alarming, 70.15% of the children never brush their teeth, indicating a severe lack of basic oral hygiene practices. Only 18.11% brush once a day, 7.14% twice a day, and 4.59% more than twice a day. This lack of regular tooth brushing is a major contributor to the high prevalence of dental caries observed in the study and underscores the urgent need for oral hygiene education and resources in these communities. The data indicates that promoting regular tooth brushing could be a key strategy in reducing the incidence of dental caries among children in urban slums.

Figure 3



CONCLUSION

The study highlights a significant public health challenge posed by the high prevalence of dental caries among children in the urban slum areas of Jodhpur. With over 55% of the surveyed children affected by dental caries, the findings underscore the urgent need for targeted interventions in these communities. The study reveals that the primary risk factors contributing to this high prevalence include poor oral hygiene practices, such as the alarming rate of 70.15% of children who never brush their teeth, as well as dietary habits characterized by frequent consumption of sugary snacks and drinks.

Socioeconomic factors play a crucial role, with the majority of families falling into lower income brackets, limiting their access to adequate dental care. The reliance on government hospitals and the use of unorganized dental practitioners further reflect the financial barriers that hinder these families from seeking timely and quality dental care. Additionally, the early onset of tooth decay among children as young as 4 years old

indicates a critical need for early preventive measures and education.

SUGGESTIONS

Enhanced Oral Hygiene Education:

Implement comprehensive oral hygiene education programs targeting both children and parents in urban slum areas. These programs should emphasize the importance of regular tooth brushing and the use of fluoride toothpaste to prevent dental caries.

Improved Access to Affordable Dental Care:

Increase the availability of affordable dental care services in urban slums through mobile dental clinics, community health workers, and partnerships with non-governmental organizations. Subsidized dental treatments at government hospitals could also be expanded to reduce the financial burden on low-income families.



Dietary Interventions:

Promote healthy dietary habits by reducing the consumption of sugary snacks and drinks among children. Public health campaigns should focus on educating families about the risks associated with high sugar intake and encourage healthier alternatives.

Early Preventive Measures:

Initiate preventive dental care programs for young children, starting as early as possible. Regular dental check-ups and the application of fluoride varnish could be implemented in schools and community centers to prevent the early onset of dental caries.

Policy and Infrastructure Improvements:

Advocate for policy changes that improve the quality and accessibility of dental care in urban slums. Investments in dental care infrastructure, particularly in government hospitals, should be prioritized to ensure that these facilities are adequately equipped to meet the needs of the population.

Community-Based Initiatives:

Encourage community-based initiatives that involve local leaders and residents in promoting oral health awareness and practices. Community-driven programs can foster a sense of ownership and commitment to improving the overall health of the community.

These suggestions aim to address the root causes of dental caries in urban slum populations and provide a roadmap for public health initiatives that can significantly reduce the burden of this preventable disease among children in Jodhpur.

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INFLUENCE OF SELF-REGULATED LEARNING ON THE ACADEMIC PERFORMANCE IN MATHEMATICS

Jhan Marie B. Balones, LPT¹, Rena Joyce R. Basañez, LPT², Louie S. Decorina³
Kenneth Jay L. Rafanan, LPT⁴, Shane Aliekhem A. Napitan, LPT⁵,
Daphne M. Legaspino, LPT, Ph.D.⁶

¹St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

²St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

³St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

⁴St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

⁵St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

⁶St. Mary's College of Tagum, Inc., National Highway, Tagum City, 8100, Philippines

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ABSTRACT

This study employed a non-experimental quantitative research design using a descriptive-correlational approach to examine the influence of self-regulated learning on students' academic performance in Mathematics. A sample of 69 Grade 10 students from St. Mary's College of Tagum, Inc. in Davao del Norte was selected through stratified sampling during the 2021–2022 school year. Two sets of survey questionnaires were administered: an adapted survey to assess self-regulated learning and a validated researcher-made test to measure academic performance in Mathematics. Statistical tools such as Mean, Pearson-r, and Multiple Linear Regression were used to analyze the data. The findings indicate that students' self-regulated learning is evident in most instances, while their academic performance in Mathematics, as reflected in summative assessment scores, was generally satisfactory but did not consistently meet expectations. The study revealed no significant relationship between self-regulated learning and academic performance in Mathematics, and no specific domains of self-regulated learning were found to significantly influence students' performance in the subject.

Based on these results, it is recommended that further research explore additional variables related to self-regulated learning and academic performance in Mathematics to identify critical factors affecting student outcomes. The findings are valuable for students, mathematics teachers, school administrators, and future researchers as they work to enhance the educational system, evaluate online learning implementation, and develop strategies to improve students' academic performance.

KEYWORDS: Education, mathematics, self-regulated learning, academic performance, descriptive-correlational approach, Tagum City, Davao del Norte, Philippines

INTRODUCTION

Educators and researchers focus on the implications of COVID-19-related school closures on students' academic progress and learning inequities (Haug et al., 2020). Also, Woessmann (2020) estimated a 0.10 SD negative effect on student academic performance in Mathematics due to COVID-19-related school closures. Further, Breslow et al. (2013) stated that learning online involves unique problems and learners may require some type of supplemental help to be successful, particularly in learning Mathematics. In this situation, some students struggle to modify their academic performance in Mathematics in a way that promotes self-regulated learning.

In University of Hong Kong, issues were found out regarding student's adjustment in learning Mathematics through online setting. Students from the Department of Mathematics and Information Technology experienced and encountered a range of difficulties in applying diverse strategies in self-regulated

learning through online setting (Kohnke, 2020). Further, Di Zou (2021) estimated 31% of students struggled in self-regulated learning particularly in learning Mathematics as they prefer to select appropriate time for online learning which is more demanding, requiring a significant amount of time and effort for students to feel confident in their mathematical performance. In Germany, students who have difficulty self-regulating in any math-related topic, particularly those who lack adequate self-regulatory skills, are more likely to have trouble performing in Mathematics (Nemati, 2020). In addition, Turkey was ranked 44th out of 65 countries, which demonstrates that the Turkish educational system seems to concentrate on a select group of children who succeed in math while most students struggle with self-regulated learning (Aydin et al., 2012).

Meanwhile, in the Philippines, the findings of the study of Prudente (2020) show that the Universities of the Philippines



found that the online environment allows for the delivery of mathematical programs in which students learn independently while communicating with their professors. It shows that the unprepared junior high learner might be daunting in the learning process and leads to difficulties in their academic performance in Mathematics. Moreover, Llagoso (2017) estimated 14 or 93% of the Grade 10 students in Cebu Normal University were interpreted as “low self-regulation” where the student's indifferent Mathematics lessons in Grade 10 demonstrate inadequate learning practices. These results demonstrate the students' lack of self-regulatory skills, which rendered them less competitive in Mathematics.

To minimize this concern, the researchers felt the need to conduct this study to help students maximize their learning in Mathematics on their own. Also, this study serves as a guide for the students, teachers, administrators, and even the future researchers to come up with a better solution in finding a better way to help the students to improve their performance in Mathematics.

OBJECTIVES

1. To ascertain the extent of self-regulated learning of Grade 10 students in terms of goal setting, environmental structuring, task strategies, time management, help-seeking; and self-evaluation.
2. To determine the level of academic performance of the students in Mathematics.
3. To determine the significant relationship between self-regulated learning and academic performance in Mathematics.
4. To determine which domains of self-regulated learning significantly influences the students' academic performance in Mathematics.

METHODOLOGY

This study is non-experimental quantitative research that adopts a descriptive- correlational design. Quantitative research design was used in this study to characterize and describe problems both descriptively and numerically, as it utilized mathematical and statistical methods as recommended by Creswell (2014). Moreover, descriptive-correlational studies describe the variables as well as the natural relationships that exist between and among them (Aprecia, 2021). This is a design that describes what exists, determines how frequently it occurs, and categorizes the information.

The descriptive-correlational research design was utilized in this study to assess students' self-regulated learning and academic performance in Mathematics. It was also used in this study considering that it involves testing whether students' self-regulated learning has a relationship to academic performance. Additionally, this study used questionnaires that served as a tool or instrument for finding answers to the various questions. The researchers adapted the research instrument, which is the Online Self-Regulated Learning Questionnaire (OSLQ), proposed by Barnard et al. (2009), but there were some items in the questionnaire that were modified to fit the context of the study. The questionnaires consist of several questions and were distributed to students who can answer those questions.

The respondents of this study were the Grade 10 students from a private school in Tagum City, Davao del Norte for S.Y. 2020–2021. Among the three (3) sections of Grade 10, two (2) sections were selected as respondents of this study, which had 69 participating students. The remaining one (1) section, which had 37 students, participated during the pilot testing. The respondents for this study voluntarily participated. This study employed stratified sampling in determining the respondents of the study

RESULTS

The extent of *self-regulated learning* of students was extensive. Among the six indicators, *environmental structuring* was highly extensive, while the other five indicators *goal setting*, *help-seeking*, *time management* and *self-evaluation* described as extensive which means that the extent of self-regulated learning is manifested on most occasions.

The findings imply that students with self-regulation are more likely to use their talents and become self-efficacious, that they study at their own pace, that they may raise their effort in a learning scenario, and that they perform better in their academic and co- curricular activities.

The result is consistent with the conclusion of Puska (2019) that the result of its multiple regression analysis reveals that SRL influences satisfaction and academic success. This is supported by the research undertaken by Barnard- Knowledge Management, E-Learning Liebowitz and Frank (2016), which found that, in contrast to this study, SRL has less effect on academic achievement. Self-regulated learning is essential these days for children in elementary school up to the college level. Further, according to Fauzi & Wadjajanti (2018), to facilitate learning and boost student motivation, self-regulated learning combines academic knowledge with self-control abilities. It influences student failure to achieve learning achievement and the students who are dissatisfied with their education require additional self-directed learning. There is a need to develop projects promoting self-regulation for students, particularly freshmen (Ganda & Boruchovitch ,2018).

Meanwhile, the level of *academic performance* of students in Mathematics in terms of scores in a summative assessment was fairly satisfactory. This means that the academic performance of students in Mathematics rarely meets expectations. This finding is supported by Reiger (2011) who stated that academic performance is significant since it is strongly linked to a student's positive outcomes. The finding is also parallel with the statement of Widlund (2018) that it has been established that not only does academic performance influence students' educational experiences, aspirations, and trajectories, but that academic well-being also influences numerous educational outcomes.

Moreover, the findings of the study showed no significant relationship between *self-regulated learning* and *students' academic performance* is. This implies that self-regulated learning is not an assurance for the students to have higher academic performance in Mathematics. The result is in



consonance with Murphy and Alexander (2000) stated that Self-Regulated Learning (SRL) is one of the students' skills that can assist them enhance their Mathematics learning accomplishments. Moreover, this finding is in congruence with the study of Cetin (2015) that there was no correlation sufficiently to GPA/ academic performance and self-regulated learning. In other words, self-regulated learning did not predict students' academic performance. It is possible to conclude that self-regulated learning is not the only factor influencing academic performance.

Since the results show that self-regulated learning has no significant role that can help the students to improve their academic performance in Mathematics. Thus, self-regulated learning does not significantly influence to the students' academic performance in mathematics. In the study of Pekrun et al. (2017), the students' gender, intellect, and family socioeconomic level, positive emotions significantly predicted future success such as math end-of-year grades and test scores.

SUGGESTIONS

After a profound consideration on the possible implications of the findings and conclusion of this study, the researcher recommends in improving the student's academic performance in Mathematics from fairly satisfactory to satisfactory by modifying existing learning strategies to enhance and strengthen their math skills. They may explore more and create new styles in learning for them to improve their academic performance. They are encouraged to choose an environment

that will help improve their academic performance and set goals for them to motivate that will also help their academic performance. Moreover, Mathematics teachers are encouraged to pay attention on their students' academic performance progress in Mathematics so that they can design and construct activities and tests that will meet their requirements and help them improve their math grades. They may cater students' queries and observe if they require assistance when answering assessments on their own to improve students' math performance. Furthermore, the school administrators may assess and give support on helping the students self-regulated learning in an online environment. They may evaluate the impact of its implementation, particularly on the learner's progress, to produce local activities and interventions for the learner's improvement and benefit. They may require and encourage educators to participate in and attend seminars, trainings, and practices that assist students' self-regulation in order to improve academic achievement.

CONCLUSIONS

Based on the findings of this study, the following conclusions are drawn. Students' self-regulated learning is manifested on most occasions. The academic performance of students in Mathematics rarely meets the expectations. There is no significant relationship between self-regulated learning and academic performance of students in Mathematics. There is no domain of self-regulated learning that significantly influences the academic performance of students in Mathematics.

TABLES AND REFERENCES

Table 1. Extent of Students Self-Regulated Learning

Indicators	SD	Mean	Descriptive Equivalent
Goal Setting	1.05	5.14	Extensive
Environmental Structuring	1.23	5.65	Highly Extensive
Task Strategies	1.22	5.03	Extensive
Time Management	1.16	5.04	Extensive
Help-Seeking	1.39	4.65	Extensive
Self-Evaluation	1.38	5.02	Extensive
Overall	1.05	5.09	Extensive

Table 2. Level of students' academic performance in Mathematics

Variable	Mean	SD	Rating (%)	Descriptive Equivalent
Academic Performance in Mathematics	27.22	10.48	78.15	Fairly Satisfactory

Table 3. Significant Relationship between Self-Regulated Learning and Students' Academic Performance

Variable	r	r ²	p-value	Decision Ho	Decision on Relationship
Self-Regulated Learning and Academic Performance	-0.007	0.000049	0.958	Not Rejected	Not Significant



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APPLICATION OF PRE-EXERCISE SELF MYOFASCIAL RELEASE AND POST-ACTIVATION POTENTIATION ON DEVELOPMENT OF SPEED AND EXPLOSIVE POWER IN MEN FOOTBALL PLAYERS

Husaif K A^{1*}, D. Sultana^{2*}, Vishnual B M³, Vishnu S^{4*}

¹Research Scholar, Department of Physical Education and Sports, Pondicherry University, India

²Professor, Department of Physical Education and Sports, Pondicherry University, India

³Research Scholar, Department of Physical Education and Sports, Pondicherry University, India

⁴Postgraduate, Department of Physical Education and Sports, Pondicherry University, India

*Correspondence

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ABSTRACT

Speed and explosive Power are key elements in the physical fitness preparation of football players training to generate high-level performance. To determine the application of Self-myofascial release (SMFR) before complex training (CT) on the development of Speed and Explosive power of footballers, Forty-five male (EX-1) SMFR+PAP=15, (EX-2) PAP=15, and CON group=15, The EX-1 and EX-2 underwent a 12-week training program, The EX-1 received foam rolling, dynamic stretching and complex training while EX-2 dynamic stretching and complex training, and the CON group followed regular exercise practices. The findings show the importance of MFR as a tool for optimal warm-up strategies during sports conditioning and before intensive activities and the combined intervention of Pre-exercise MFR before Complex training improves the performance of football players. Compared to the CON group the EX-1 and EX-2 groups showed significant improvements in both speed and Explosive power and the MFR+PAP group displayed the most significant improvement. Further, long-term investigations recommend exploring the durability and long-term benefits of SMFR and PAP interventions in different sports fields and elements that result in optimal performance.

KEYWORDS: Complex training; Self-mayo facial release; Myofascial release; Post-activation potentiation;

INTRODUCTION

Modern sports to a great extent demanding and determined by the level of Explosiveness and speed. Apart from mental and tactical preparations, speed and strength exercises are the crucial part of soccer training. Soccer players accelerate and decelerate repeatedly throughout a single football game (Dalen et al., 2016). Hence, Speed and strength training, including Explosive power are key aspects of soccer players' physical fitness preparation. In modern team games, the ability to generate high values of muscular power has a substantial effect on performance. Using PAP in training allows for significant gains in speed (Pajerska et al., 2021). Speed movement and explosiveness in Soccer games are defined as perception, prediction, anticipation, reaction, decision-making, and combination of movements (Teoldo et al., 2023). Regardless of the playing position Speed and Explosiveness are essential qualities for the player in the tactical situations in which sprints and explosive movements occur (Lobo-Triviño et al., 2024). The speed gives an advantage to the player during the game in reaching the ball faster to beat the opponents. Depending on the speed and explosive moves help the forwards and defenders to score goals or stop their opponents' attacks (Pajerska et al., 2021). Scientifically opted optimal warm-up is highly necessary to prevent injury and achieve top speed and maximum strength during the competition (Read et al., 2020). The Muscle needs to train in specific conditions to perform the

intensive actions and sequence of the movements (Schoenfeld, 2010).

MFR was developed by John F. Barnes, to help reduce the dysfunction caused by restrictive fascia. MFR is a manual therapy technique that involves the use of hands and types of equipment. Specifically, MFR has been used to reduce stiffness and tightness and increase the circulation of blood. The MFR improves compliance of fascia and connective tissue surrounding the muscle and neuromuscular, designed to reduce injury risk and ROM (Cheatham et al., 2015). The MFR categorised into two methods: The MFR technique applied by a professional, and the MFR technique performed by the individual (Hansen et al., 2015). SMR is a technique that uses FR or MR to provide soft tissue massage and enhance mobility in the muscle fascia. In addition, including SMR in warm-ups and cool-downs greatly impacts the physical performance qualities of both professional and amateur athletes, including the development of ROM and abilities. (Martínez-Aranda et al., 2024). Foam rolling has been used in sporting situations to enhance flexibility and reduce stiffness in the muscles while maintaining the strength of the muscles and athletic performance (Nakamura et al., 2021). However, no research has been conducted to examine the long-term impact of SMFR with FR during a warmup intervention before PAP. The CT regulates the PAP, which occurs due to the contractile history of the muscle and develops the force output of the muscle



(Robbins, 2005). Pre-exercise-MFR and PAP are two distinct yet complementary interventions investigated here. Considering the PAP initial exercise is related to a reduction in maximum force output that occurs while performing back-to-back efforts. Several studies suggest that PAP can be manipulated to enhance both acute and chronic performance. CT involves performing the HRE before an explosive exercise with similar biomechanical properties, sometimes called a complex pair. Several sets of the complex pair are repeated, each one bringing about a long-term change in a muscle's tendency to generate power. CT has been used to achieve PAP, which consists of a highly loaded resistance activity followed by an explosive activity specific to the particular sports discipline and PAP occurs in muscles when muscle fibers are activated by strength training (Tillin & Bishop, 2009). Post-activation of muscle fibers has a direct impact on the rate of force development in a short period and the training conditions and protocols adapt with the muscle groups to actions and sequence of the movements. While both interventions have demonstrated individual efficacy, the combined impact on speed and Explosive power deserves further investigation. The foam rolling intervention reduces muscular stiffness and increases the pliability of muscles to achieve better outcomes through complex exercises. Therefore, the objective of this research was to examine the influence of SMFR during the warmup and the effect of CT on the speed and Explosive power performance of footballers.

Abbreviations and Acronyms

Complex training (CT), Self-mayo facial release(SMFR), Myofascial release (MFR), Foam roll (FR), Post activation potentiation (PAP), Massage roll (MR), Range of motion (ROM), Delayed-onset muscle soreness (DOMS), Heavy resistance exercise (HRE), Experiment group (EX), Control group (CON).

METHODS

Subjects and Ethical Consideration

A total of 45 football players were selected for the study from various colleges at Calicut University. In the SMFR+PAP group, age, body mass, height, and BMI were 22.1 ± 1.05 years, 62.4 ± 8.9 kg, 168.9 ± 6.6 m, and 22.1 ± 2.8. In the PAP

group 22.7 ± 1.2 years, 63.6 ± 7.5 kg, 169.8 ± 5.9 m, and 23.3 ± 2.1. In the CON group 23.4 ± 1.01 years, 63.1 ± 8.9 kg, 169.1 ± 5.5 m, and 23.7 ± 2.4. The average age of the players was 22.1 ± 105 years, body mass 62.4 ± 8.9 kg-, the height was 168.9 ± 6.6 m, and the BMI was 22.1 ± 2.8. The study included male participants aged 19 to 24 who had played at the university level for one to five years. Participants were precluded from the study if they had been injured and were currently undergoing rehabilitation within the past six months. Ethical clearance was obtained from the institutional the institutional ethical committee of Pondicherry University, Puducherry, India.

Experimental Procedure

Purposive sampling was implemented in this investigation, The experimental interventions and the subjects were randomly assigned to two Experimental Groups and one CON Group, each of which contained 15 subjects. The EX-1=15 (MFR+PAP) and EX-2=15 (DS+PAP) underwent a 12-week training program. The EX-1 Group received Foam Rolling, DS, and CT while the EX-2 Group received DT and CT three days per week. The pre-tests and post-tests were administered to all groups. The CON group (=15) members engaged in routine practice without being enlisted in any particular training program, and the workout series lasted from 75 to 85 minutes. The training schedule, for both EX groups, starts with 10 minutes of static stretching EX-1 alone will undergo 15-20 minutes of SMFR and join EX-2 10 min cardio warmup session and 10 min DS movements with emphasis on CT excises, then both groups will undergo CT.

Statistical analysis

All statistical procedures were conducted using Statistical Package for the Social Sciences (SPSS 11.0 for Windows, SPSS Inc., Chicago, IL). The data was subjected to a Paired t-test to identify the significant difference between the pre-test and post-test of both experimental groups and the control group respectively. Analysis of covariance (ANCOVA) was used to find out the significant difference between the control group and experimental groups. Scheffe's Post hoc test was employed to the significance of the mean difference among the groups. A 0.05 level of confidence was fixed to test the hypothesis.

RESULTS

Speed

Table 1. Descriptive Statistics of Speed

Groups	Pre-Test		Post-Test		df	T-Ratio
	Mean	SD	Mean	SD		
MFR+PAP	7.47	.304	6.76	.246	14	8.809*
PAP	7.50	.302	6.97	.203	14	5.649*
CON	7.48	.308	7.34	.231	14	1.941

*Significant at 0.05

The T-Ratio for the MFR+PAP group is 8.809 > 2.145 and the PAP group 5.649 > 2.145 table value shows significant improvement in speed after the intervention. Similarly, the. The

CON group 1.941 < 2.145 indicates no significant improvement.



Table 2. ANACOVA of Speed

TEST	MFR+PAP	PAP	CON	SoV	Sum of Square	Df	Mean Squares	F
Pre-test								
Mean	7.47	7.50	7.48	B	.005	2	.002	.026
SD	.304	.302	.308	W	3.90	42	.093	
Post-test								
Mean	6.76	6.97	7.34	B	2.61	2	1.30	25.239*
SD	.246	.203	.231	W	2.17	42	.052	
Adjusted post-test								
Mean	6.76	6.97	7.34	B	2.59	2	1.30	27.053*
				W	1.97	41	.048	

*Significant at 0.05

The F value for the pre-test is $0.026 < 3.23$ no significant differences in speed means among the groups before the intervention. The F value for the post-test is $25.239 > 3.23$ significant differences in post-test speed means among the

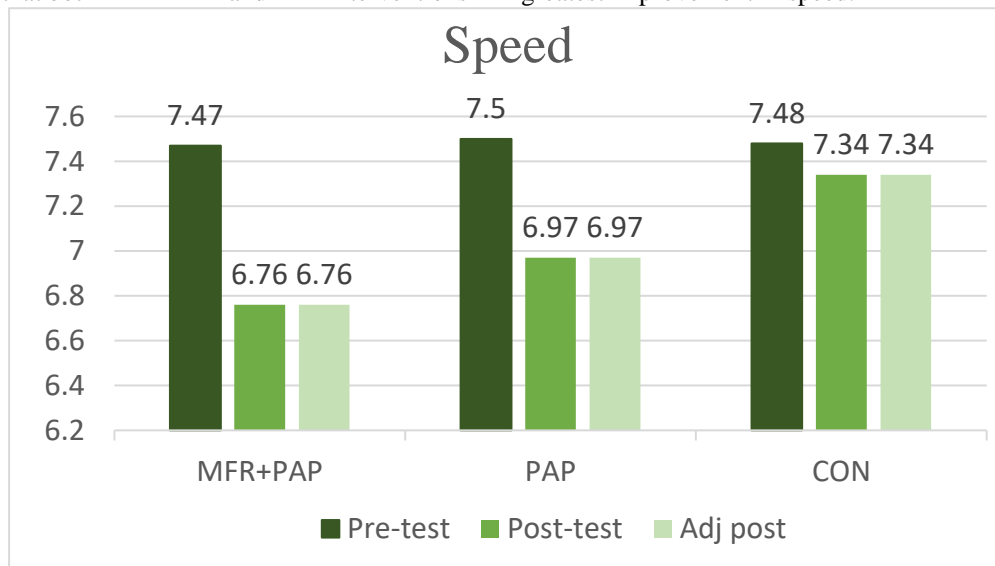
groups. The F value for the adjusted post-test is $27.053 > 3.22$, confirming significant differences in speed means among the groups.

Table 3. Post hoc test of Speed

MFR+PAP	PAP	CON	Mean Difference	Confidence Level Value
6.76	6.97	-	0.21*	0.203
6.76	-	7.34	0.58*	
-	6.97	7.34	0.37*	

MFR+PAP vs. PAP= MD 0.21 > 0.203 CV, MFR+PAP vs. CON= MD 0.58 > 0.203 CV, PAP vs. CON= MD 0.37 > 0.203 CV. This indicates that both MFR+PAP and PAP interventions

were significantly more effective than the control condition, with the combined MFR+PAP intervention showing the greatest improvement in speed.



Explosive Power

Table 4. Descriptive Statistics of Vertical jump

Groups	Pre-Test		Post-Test		df	T-Ratio
	Mean	SD	Mean	SD		
MFR+PAP	47.20	2.18	50.60	2.29	14	6.608*
PAP	46.60	1.72	48.60	1.88	14	3.568*
CON	46.47	2.61	46.87	2.20	14	1.309

*Significant at 0.05



The T-Ratio for the MFR+PAP group is 6.608 > 2.145 and the PAP group 3.568 > 2.145 table value, showing a statistically significant improvement in Explosive power after the

intervention. The CON group 1.309 < 2.145 indicates no significant improvement.

Table 5. ANACOVA of Explosive Power

TEST	MFR+PAP	PAP	CON	SoV	Sum of Square	Df	Mean Squares	F
Pre-test								
Mean	47.20	46.60	46.47	B	4.58	2	2.29	.472
SD	2.18	1.72	2.61	W	203.73	42	4.85	
Post-test								
Mean	50.60	48.60	46.87	B	104.71	2	52.36	11.517*
SD	2.29	1.88	2.20	W	190.93	42	4.55	
Adjusted post-test								
Mean	50.32	48.67	47.05	B	78.99	2	39.50	14.446*
				W	112.10	41	2.734	

*Significant at 0.05

The F value for the pre-test 0.472 < 3.23 no significant differences in explosive power means among the groups before the intervention. The F value for the post-test 11.517 > 3.23 significant differences in post-test speed means

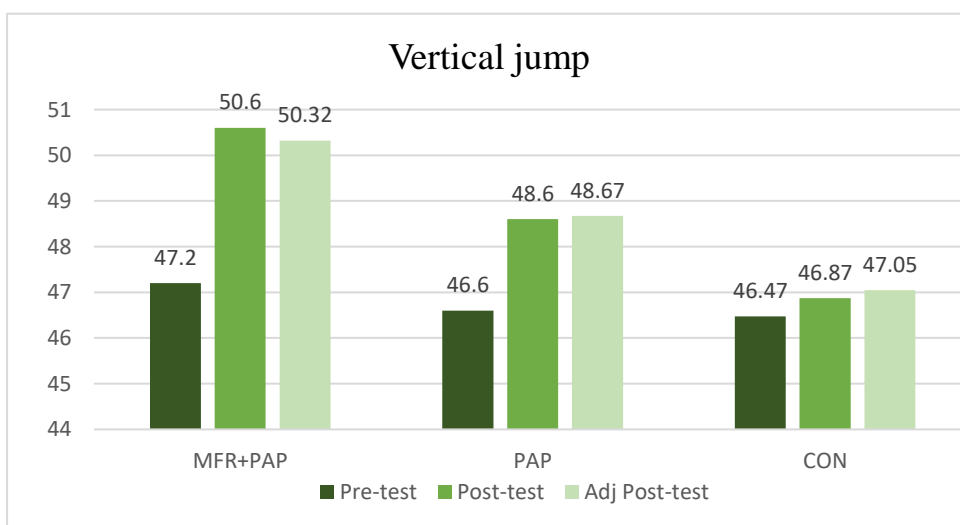
among the groups. The F value for the adjusted post-test 14.446 > 3.22, confirming significant differences in Explosive power means among the groups.

Table 6. Post hoc test of Explosive power

MFR+PAP	PAP	CON	Mean Difference	Confidence Level Value
50.32	48.67	-	1.65*	
50.32	-	47.05	3.27*	1.532
-	48.67	47.05	1.62*	

MFR+PAP vs. PAP= MD 1.65 > 1.532 CV, MFR+PAP vs. CON= MD 3.27 > 1.532 CV, PAP vs. CON= MD 1.62 > 1.532 CV. This indicates that both MFR+PAP and PAP interventions

were significantly more effective than the control condition, with the combined MFR+PAP intervention showing the greatest improvement in Explosive power.



DISCUSSION

The purpose of the study was to investigate the influence of pre-exercise SMFR during the warmup and the combined effect with PAP on the development of speed and explosive power in

football players. After the 12-week intervention both the experimental group confirmed the development of speed and explosive power. The MFR+PAP group shows significant improvement compared to the PAP group. (Hendricks et al.,



2020) Investigated the impact of dynamic flexion with foam roller application on the efficacy of vertical jumps, knee strength, and hip flexibility. The application of SMR techniques before the intensive exercises aimed and designed to improve flexibility and reduce skeletal muscle injuries and as a result the movement patterns develop, enhancing strength, power, and overall speed and performance (Lim & Park, 2019). SMFR with FR increases ROM and neuromuscular efficiency and reduces muscle stiffness, and the players become able to execute high-velocity and explosive motions to a greater extent and optimally potentiated warm-up is a greater concern in achieving muscle activation. The MFR combined with dynamic exercises may provide a viable option before intensive exercise (Martínez-Aranda et al., 2024). the present study suggests that SMFR before the CT session reduces the recovery time and enhances the quality of recovery pain perception, and fatigue, and reduces the DOMS. The combination of SMFR before PAP activates and stimulates the muscle force output. The recruitment of higher-order motor neurons may be increased by the heavy-loaded exercise and also improve the performance of subsequent explosive activities and increase the contribution of rapid twitch fibers (Tillin & Bishop, 2009). The current findings suggest that foam rolling as an SMFR tool used for high-resolution activation before CT. The MFR causes the soft tissues of the muscle due to repetitive activation of neuro receptors and stimulates the fascia. MFR specifically targets the fascia and significant effect on anaerobic power production after 30, 60, and 90 seconds (Hansen et al., 2015). PAP principles have been applied to short-term motor performance as well as being used as a rationale for long-term neuromuscular changes through CT (Pajerska et al., 2021), and PAP uses a conditioning exercise to stimulate greater recruitment of motor units and activation of muscles and results in the enhancement of performance on explosive movements. Both Experimental groups show a significant increase in explosive power and speed. studies suggested that heavy resistance training and high-intensity loaded exercises increase explosive movements that enhance the explosive ability of the muscles. (Ampillo et al., 2015) confirming that lower body CT exercises improve the speed and related movements. Explosiveness and power movements are critical factors for skill execution and gaining an advantage over opponents during the game. The application of the PAP develops muscle strength and power improving speed and explosiveness and the substantial quantities of force and quick reactions influence the striking, jumping, heading ball, and quick runs and turns of the football players. PAP principles have been applied to short-term motor performance as well as being used as a rationale for long-term neuromuscular changes through CT(Pajerska et al., 2021).

This may be beneficial to improve the performance of various skills, such as sprinting, and jumping. The fatigue co-exists in skeletal muscle, and the muscle performance following intensive resistance training depends upon the equilibrium between muscle fatigue and muscle potentiation. In comparison to the intervention groups, the MFR+PAP group shown had a distinct benefit for the players before participating in the main sessions. Since the variation in speed and explosive power performance after 12 weeks of intervention this method

has been suggested to the professionals to determine the practical significance.

CONCLUSION

In conclusion, the study findings indicate the importance of MFR during the warmup session and the importance of PAP to enhance speed and explosive power. The 12-week structured intervention builds a dimension to the warmup regulations and the combined effect with PAP on Speed and explosive power are essential abilities for players' movement function and performance. The findings provide key steps and ideas about the Pre-exercise SMFR with FR Before intensive exercise sessions and the contribution to the performance of the players.

Further research is warranted to Conduct longitudinal studies and follow-up assessments to assess the long-term effects of Pre-exercise SMFR and PAP interventions on athletes' performance, and durability.

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IMPACT OF MGNREGA ON WOMEN EMPOWERMENT WITH SPECIAL REFERENCE TO OJINAHALLI PANCHAYAT IN KOPPAL DISTRICT

Smt. Santoshkumari N¹, Dr Jatappa J²

¹Assistant Professor, Department of Economics, Government first Grade College, Koppal

²Faculty Member, Department of Economics, Government first Grade College, Koppal

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ABSTRACT

There is inequality and vulnerability of women in all sphere of life. They need to be empowered in all walks of life. Without the active participation of women, establishment of a new social order may not be a successful one, because women constitute half of the population. Empowerment of women is a long and difficult process which is to be promoted with full public support and this could be successful only when those women living at the lower strata who have been suppressed by the male dominated society taking undue advantage of their lack of education and poverty can rise up to claim their rightful place in their own society. The present study is an attempt to measure the impact of MGNREGA on women empowerment and gender equality and the factors attributed to potential of women empowerment under MGNREGA. The study reveals that MGNREGA can enhance the women empowerment even though the objective of MGNREGA is either women empowerment or gender equality.

INTRODUCTION

The empowerment of rural women is vital for the development of the rural India. Women must empower themselves from bottom so that the government can empower themselves from above through their policies. In the other words “empowering women is a requirement for creating a prosperous nation, when women are empowered, societal stability is assured”. The MGNREGA has made positive impact on empowerment and employment of women since its inception. It aims at improving livelihood security by providing at least 100 days of guaranteed wage employment in a financial year to every rural household especially for women. Women participation has improved significantly and it has given them a sense of independence and security. Women play important role in the growth of the society as well as the country. It is very important to empower women. Empowerment of women refers to the influence of decision making on their own. The word “empower has become equal with the word women”.

Gender is the unavoidable push factor for growth and development of a poor nation like India. Though women have been contributing to economic productivity since the dawn of human history, their role has been visualized as an inactive one. Moreover it is observed that women often experience the situation of extreme poverty which is further aggravated by household and social discrimination. In spite of the various provisions in our constitution, the harsh reality is of deprivation and degradation for women. The old system of considering women as their

property of men is still deep rooted as an instinct in the society. The changes have taken place in a significant portion of urban women, but their counterparts living in rural areas are only marginally affected by these changes. Women empowerment especially economic empowerment is the only way by which it can be possible to give equal status to women in a male dominated society. To be empowered, women should come forward and realize that they are not second class citizen of the society and at the same time also equally capable with men in all aspects of livelihood. Their empowerment has a huge potential in leading the country to an impressive development. The accomplishment of inclusive growth and overall development is highly dependent on the gender equality and prosperity of women in the rural society.

MGNREGA AND EMPOWERMENT OF WOMEN: AN ANALYSIS

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a milestone legislation approved by the parliament of India after a successful struggle for employment guarantee legislation. MGNREGA as a flagship programme of Government of India and it was notified on September 7, 2005 in 200 rural districts in its first phase of implementation which took an effect from February 2, 2006.

In 2007–08, an additional 130 rural districts were added under this scheme. The rest districts were notified later under MGNREGA with effect from April 1, 2008. After this period



MGNREGA has covered the whole country with the exclusion of districts that have a hundred percent urban population. The main purpose of the Act is to enhance livelihood security of the rural household by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. It was fundamentally a programme to provide fundamental income and employment opportunities to poor households in rural areas where opportunities of work did not exist or was very limited. The programme is dissimilar from earlier wage employment programmes in terms of its right based and demand driven approach to public work.

REVIEW OF LITERATURE

The literature review on women empowerment reflects the findings of various researchers and academicians on MGNREGA through reputed national and international journals, magazines and annual reports are presented by the authors below for easy understanding.

Ramesh & Kumar (2009) in their study also find that MGNREGA holds the powerful prospect of bringing major changes in the lives of women. MGNREGA is playing a substantial role in empowering women economically and laying the basis for greater independence and self-esteem.

Hazarika (2009) examined the impact of MGNREGA on gender empowerment in Morigaon and Bongaigaon district of Assam. The study concluded that almost 70 to 80 percent of sample workers had meaningful income other than unpaid family work during the pre-NREGA. Majority of the worker felt that they are now in better position to fulfill their own requirement without looking at others.

Khera and Nayak (2009) through their sample survey in six Hindi speaking states of North India focuses on impact of NREGA in the lives of women workers. Their study reveals that there is significant benefits reported by women include increased food security and better ability to avoid hazardous work.

Lavanya and Mahima (2013) dogged the scope of women empowerment through MGNREGA in Palakkad. The results of the study showed that MGNREGA had made the women beneficiaries economically independent and it was also concluded that the programme had laid a foundation for self-esteem and independence for women beneficiaries.

K. Borah and R. Bordoloi (2014) in their research paper, MGNREGA and its wages on Daily Waged Workers: A case study of Sonitpur District of Assam has discussed about the impact of MGNREGA on women empowerment and identified the obstacles in the path of the implementation of the scheme. The paper discovered that female workers have significant benefits

from MGNREGA and also identified some limitations in the implementations of the Act.

Mafruza Sultana and Srinivasa Rao K.S (2016) in this paper, the status of women participation and their performance in MGNREGP in India, particularly in the state of West Bengal, has been discussed. The purpose of this paper is also to study, how women have empowered themselves with an innovative MGNREGP Program, particularly the women from socially and economically marginalised groups which ultimately leads to the sustainable development of society as a whole. Even though globalisation has changed every sphere of life, still issues like gender disparities, risk, vulnerability and challenges faced by women are prevalent in society.

Negi RS (2015) the study is an attempt to assess the impact on MGNREGA has a positive impact on the employment pattern of women. MGNREGA works are primarily focused on land and water resources which include: water harvesting and conservation, soil conservation and protection, irrigation provisioning and improvement, renovation of traditional water bodies, land development and drought proofing.

Jyoti Poonia (2012) this study was highlighted the impact and women participation in MGNREGA. The overall preliminary finding confirms that the NREGA has the potential to stimulate local development if the management and delivery are right; and that women's weak position in the labour market has much helped.

Kabita Borah and Rimjhim Bordoloi (2014) the primary objectives of the research are to study the impact of MGNREGA on women empowerment and to identify the obstacles in the path of the implementation of the scheme. Female workers significant benefit reported by the study include – income gains, social empowerment, more say in intra household decision making and creation of community assets etc.

Xavier G and Mari G (2014) the study finds that the MGNREGA increases income and expenditure of the households compared over the pre MGNREGA period and the scheme significantly enhances the social and economic decision making power to women in the men dominated rural society. Hence the system ensures improved standard of living of the vulnerable poor, more specifically among women.

Objectives of that study

This study examines the impact of MGNREGS at the household level, i.e. to study impact of earned incomes of women on household consumption, savings and investments, economic empowerment of women in terms of their control over household resources, social impact on intra-household power relations between men and women and overall well-being of men and



women in the household in the areas of health, education, nutrition etc.

Impact of MGNREGS on Women in Ojinahalli Pachayath

MGNREGA has potential to enhance women's economic independence through which women empowerment since it is gender sensitive in its formulation. Through the various provisions and guidelines in the Act, the legislation visualizes that women have an equitable access to work, affirmative conditions at work/on sites, equal payment of wages and representation in decision making bodies. To assess the women empowerment and the factors attributed to it, a field study was taken up by selecting only women households in Ojinahalli Village of Koppal Districts of Karnataka during February 2024. The data has been analysed

and interpreted in order to know the impact of MGNREGA and participation of women in the selected village.

METHODOLOGY

Primary data is collected through a structured schedule to capture in-depth information on the multiple impacts of MGNREGA from the sample households. Based on the occupational distribution of the households a stratified random sample of 50 women households was drawn for an in-depth study. The Secondary data on various aspects like physical and financial performance viz. The present investigation was carried out in Koppal district of Karnataka during February 2024. Ojinahalli Village of Koppal district was purposively selected for the study because MGNREGA programme was effectively implemented in the district since 2006-2007.

Table 1; District wise Progress under MGNREGA 2023-24 (upto November 2023)

District	Total Cumulative Expenditure (Rs. in Lakhs)	Person days Generated (No)	Cumulative No. of HH Provided Employment (No)
Bagalkote	20391.76	4426710	104658
Ballari	20565.15	5971151	109928
Belagavi	46562.18	9991660	254703
Bengaluru	281.94	63659	1697
Bengaluru Rural	6371.68	1384751	30429
Bidar	19676.93	3896175	103088
Chamaraja Nagara	8149.9	1570883	54297
Chikkaballapura	11933.17	2533830	66457
Chikkamagaluru	11151.24	2221992	53897
Chitradurga	19122.03	4544787	107552
Dakshina Kannada	4602.3	985607	23174
Davanagere	11101.65	2593758	65267
Dharwar	8845.8	1860654	48436
Gadag	13908.28	3448269	92306
Hassan	16393.66	3159510	84246
Haveri	17022.58	3625587	90496
Kalaburagi	20399.71	4665149	159983
Kodagu	1779.61	375265	10502
Kolar	15546.82	3022869	69547
Koppal	29908.4	8182242	182212
Mandya	12420.88	2181594	64629
Mysuru	8770.04	1685238	51239
Raichur	42268.5	10358641	227368
Ramanagara	17565.91	2834366	71761
Shivamogga	9307.49	2087372	79471
Tumakuru	21420.96	4183083	108576
Udupi	3488.84	587492	16254
Uttara Kannada	6173.01	1290250	41050
Vijayanagara	27455.17	6751135	123828
Vijayapura	13525.59	3212907	87874
Yadgir	15045.7	3759814	103991
All District Total	481156.88	107456395	2688916

Source: RDPR



Table 1 explained that Progress achieved Under MGNREGA As on November, 2023, an amount of Rs. 4818.19 Crores has been spent and 10.74 crore person days wage employment has been generated through which 26.88 lakh households have been provided employment and MGNREGA is given in Wage

employment generated under State Government major programmes is 4.73 Crore Man days employment generated between April 2023 to November 2023.

Table 2: Distribution of the respondents on the basis of their Age, Marital Status, Education and Occupation (N=50)

Indicator	No. of respondents	Percentage
Age		
Below 25 years	3	6
26 to 35	12	24
36 to 45	24	48
46 to 55	7	14
56 to 65	4	8
Total	50	100
Marital Status		
Married	44	88
Unmarried	1	2
Widow	5	10
Total	50	100
Education		
Illiterate	10	20
Literate	8	16
Primary	9	18
Secondary	8	16
High School	10	20
And above	5	10
Total	50	100
Occupation		
Farmers	44	88
Agricultural Labour	4	8
Non-Agricultural labour	2	4
Total	50	100

Source: Field Study

Table 2 presents the distribution of sample households on the basis of their age, marital status, Education and Occupation. As regards the age groups of the participants, the highest participation is from the age group of 36 to 45 years constituting 48 per cent followed by 26-35 years and then by 46-55 age group. Again, married women constitute 88 percent of the total MGNREGS workers, followed by widows/ divorcees/ deserted women, who constitute about 10 percent of the total participants. Based on the educational status of the respondents 20 per cent are

illiterates, 20 per cent were completed high school education, 18 per cent were completed primary education, 16 per cent were completed secondary education, another 16 per cent are literates and only 10 per cent of the respondents were completed above high school education. With regard to occupation, 88 per cent of the respondents are small and marginal farmers, 8 per cent of the respondents are agricultural labour and only 4 per cent of the respondents are non-agricultural labour.

Table 3: Income levels of households before and after participation of MGNREGS

Income Level (Per Annum)	Before		After	
	No. of respondents	Percentage	No. of respondents	Percentage
Below 10000	13	26	0	0
10001 to 20000	29	58	0	0
20001 to 30000	7	14	2	4
30001 to 40000	1	2	2	4
40001 to 50000	0	0	10	20
above 50000	0	0	36	72
Total	50	100	50	100

Source: Field Study



Changes in Income levels

MGNREGA enables the households especially the women households to enhance their income levels with the provisions in the Act like equal wages, equitable access to work, specific working hours, work site facilities, timely wages etc. Table 3 presents the annual income levels of the sample households before and after participation of MGNREGS. There is a substantial increase in the income levels of the households after participation of MGNREGA in the village. It is evident from the table 6, the households below Rs. 10000/- and Rs. 10001-20000 per annum before MGNREGA were 26 per cent and 58 per cent

respectively where the households for the same income levels after participation of MGNREGA were zero per cent. The households between Rs. 20001-30000 and Rs. 30001 to 40000 per annum before MGNREGA was 14 per cent and 2 per cent respectively whereas the households for the same income levels after participation of MGNREGA were 4 per cent each. The households belong to Rs. 40001 to 50000 and above Rs. 50000 per annum before MGNREGA were zero per cent each against the households for the same income levels after participation of MGNREGA were 20 per cent and 72 per cent.

Table 4: Share of total income spent towards domestic consumption before and after participation of MGNREGS

Item	Before (%)	After (%)
Food	69	34
Clothing	11	17
Education	14	26
Health	5	11
Household asset	1	12
Total	100	100

Source: Field Study

MGNREGA has made considerable impact on consumption pattern of the beneficiaries. They have started using the increased income (basically earned from MGNREGA employment) towards the purchase of better clothes, providing quality education to their children, better health and purchase household assets. Table 4 presents the share of total income spent by the sample households towards domestic consumption before and after participation of MGNREGS. The proportion of total income

spent towards food before MGNREGA stands at 69 per cent and it is decreased to 34 per cent after participation of MGNREGA. There is a considerable change in the consumption pattern towards education, health and household assets which stands 14 per cent, 5 per cent and 1 per cent respectively before participation of MGNREGA and it is increased to 26 per cent, 11 per cent and 12 per cent respectively after participation of MGNREGA.

Table 5: Saving pattern of the households before and after participation of MGNREGS

Mode of saving	Before		After	
	No. of respondents	Percentage	No. of respondents	Percentage
Bank account	20	40	10	20
Insurance	1	2	12	34
Chits	19	38	5	10
SHGS	10	20	10	20
Government schemes	0	0	13	36
Total	50	100	50	100

Source: Field Study

Changes in Savings Pattern

Increased income through participation in MGNREGS induced the sample households to save more for the future and also makes them to change their pattern of savings. After participation in MGNREGS the households became aware of basic financial literacy and they started savings on modern financial assets like insurance and also started savings in various Government social security schemes. Table 5 presents the savings pattern of the sample households before and after participation of MGNREGS.

The preferential modes of saving of the households before participation of MGNREGS are Bank Account (40 per cent), Chits (38 per cent) and SHGs (20 per cent) and after participation of MGNREGS, their preferential modes of savings has been changed towards modern financial assets like insurance (34 per cent) and various Government social security schemes (36 per cent) etc.



Changes in Decision making of women on domesticspending and savings

Table 6: Decision making of women on spending and savings before and after MGNREGS (Percentage)

Sl.No	Item	Before			After		
		Self	Husband	Both	Self	Husband	Both
1	Food	44	20	36	88	2	10
2	Clothing	14	66	20	46	4	50
3	Children'sEducation	30	48	22	52	6	42
4	Health	50	18	32	78	10	12
5	Householdassets	18	72	10	50	14	36
6	Transport	20	58	22	54	8	38
7	Social andreligious events	34	36	30	94	0	6
8	Savings	44	40	16	92	2	6

Source: Field Study

Decision making by women on spending and savings at their homes is one of the important indicators of women empowerment. Keeping this in view, the sample households were enquired about the degree of change in decision making towards spending on domestic goods like food, clothing, children's education, health, household assets, transport, social and religious events and savings. Table 6 presents the proportion of

change in decision making of women on spending towards domestic goods and savings before and after participation of MGNREGS. It reveals that there is a positive change in the decision making on spending for various domestic goods and savings which were earlier dominated by male members in the family. This may be due to contribution made by the women to the family income through wages obtained in MGNREGA.

Table 7: Factors attributed to potential of women Empowerment under MGNREGA

Factors related to Socio Economic and Political Empowerment of Women	Yes(Weight 2)	To Some extent (Weight 1)	No (Weight 0)	Total Score	Weight Average Score
Better and financial discipline	34	14	2	82	1.64
Freedom to spend and save the earnings	34	9	7	77	1.54
Freedom from money lenders and bankers	29	17	4	75	1.5
Total Score for 3 factors on Economic Empowerment				234	1.56
Deciding on purchase of household goods	40	4	6	84	1.68
Freedom to decide on children's education	78	12	5	168	3.36
Raising voice against injustice	17	22	9	56	1.12
Total Score for 3 factors on Social Empowerment				308	2.05
Expression opinion meetings/discussions	22	21	7	65	1.3
Election campaigning/contesting in elections	20	25	5	65	1.3
Public speaking ability	12	30	8	54	1.08
Total Score for 3 factors on Political Empowerment				184	1.23
Grand Total Score for the 9 Social, Economic and Political factors				726	1.61

Source: Field Study

Potential of Women Empowerment

For assessing the women empowerment potential of MGNREGA by means of a field study, the following factors

have been considered: (i) Better Financial planning and discipline, (ii) Freedom to spend and save the earnings, (iii) Freedom from moneylenders and bankers, (iv) Deciding on



purchase of household goods, (v) Freedom to decide on children's education, (vi) Raising voice against injustice, (vii) Expressing opinion in meetings/discussions, (viii) Election campaigning / contesting in elections, (ix) Public speaking ability.

Suitable weights are attached to the responses of the respondents viz. the 50 women workers under study as follows: 'Yes' Weight 2, 'To Some Extent' Weight 1, and 'No' Weight 0. The factors leading to women empowerment can be categorized based on their empowerment potential into three major groups viz. High Empowerment (Average Score above 1.33), Moderate Empowerment (Average Score between 0.67 to 1.33) and Low Empowerment (Average Score below 0.67).

From Table 7, it is noted that MGNREGA has got an appreciably high level of potential for women empowerment. This is evidences from the high average score of 1.61 considering all the nine factors together. Besides, it is noted that the social empowerment potential is the highest compared to economic and social factors. This may be attributed to very high score for individual factors like freedom to decide on children's education (3.36) and deciding on purchase of household goods (1.68). However, it is to be noted that the average score for the factor of raising voice against injustice stands moderate (1.12). With respect to economic empowerment too, the overall potential for empowerment is high at the level of 1.56; and among the three individual factors in this group the factor 'better financial discipline' has got a very high score of 1.64, followed by another factor 'Freedom to spend and save the earnings' with a very high score of 1.54 while the third factor 'freedom from money lenders' has also got a high score of 1.50. With respect to political empowerment, the average score for the three factors put together (1.23) as well as the individual scores for the three different factors are quite moderate. In short, it may be pointed out that MGNREGA implementation has given rise to very high level of social empowerment, high level of economic empowerment and quite moderate level of political empowerment of rural women.

CONCLUSION

The study reveals that MGNREGA can enhance the women empowerment even though the objective of MGNREGA is neither women empowerment nor Gender equality. This is because MGNREGA does provide women (both engaged in the labour market or working as housewives) an opportunity to earn (minimum) wages and incomes; to mobilize to develop collective strength (in the form of SHGs or in any other forms); and to participate in village level institutions like Gram Sabhas, Vigilance Committees, Social audits etc. The study has shown that by accessing these opportunities, women MGNREGA and women's empowerment tend to influence intra-household relationships in their favour and tend to acquire improved

bargaining within and outside the home. Though these developments do break some barriers to gender equality, they do not remove all the barriers to women's empowerment. That is, MGNREGA by and of itself cannot achieve complete gender equalities in the economy and the society. This is because empowerment of women, basically, is brought about not by one programme but by an enabling macro environment, including enabling macroeconomic environment.

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THE ROLE OF LIBRARIES AS INFORMATION GATEWAYS IN THE ERA OF GLOBALIZATION: CHALLENGES AND OPPORTUNITIES

Mr. Amit Anandrao Mandave

Yashwantrao Chavan Maharashtra Open University, Dnyangangotri near Gangapur Dam, Nashik,
Pin Code-422222, Maharashtra (India)

Address of Correspondence: Mr. Amit Anandrao Mandave, Yashwantrao Chavan Maharashtra Open University, Dnyangangotri near Gangapur Dam, Nashik, Pin Code-422222, Maharashtra (India)

ABSTRACT

In the rapidly advancing era of globalization, libraries have transformed from mere custodians of physical books into dynamic information hubs, serving as crucial gateways to a world of knowledge and learning. This evolution is characterized by their expanding role in facilitating not only the dissemination of information but also the preservation of cultural heritage, support for educational pursuits, and the promotion of social inclusion. As the demand for immediate access to information grows, libraries find themselves at the crossroads of traditional services and modern, technology-driven expectations, transcending geographical, cultural, and linguistic barriers. This review delves into the intricate and multifaceted role of libraries in today's globally interconnected environment, where they are tasked with navigating complex challenges while capitalizing on emerging opportunities. The challenges include the persistent digital divide that hinders equitable access to information, financial constraints that limit the ability to modernize and expand services, and the pressing need for continual technological upgrades to remain relevant in an increasingly digital world. Additionally, libraries face the daunting task of managing vast amounts of digital data while ensuring the privacy and security of user information. On the flip side, globalization offers libraries unprecedented opportunities. The potential for global collaboration has never been greater, enabling libraries to share resources, knowledge, and best practices across borders. The digitization of collections opens new avenues for preserving and providing access to rare and valuable materials, reaching a global audience and ensuring that cultural and historical treasures are not lost to time. By embracing cutting-edge technologies, such as artificial intelligence, blockchain, and cloud computing, libraries can enhance their service offerings, streamline operations, and improve user experiences. Adapting to the rapidly changing information landscape, libraries have the potential to strengthen their role as indispensable institutions that support lifelong learning, critical thinking, and informed citizenship. This review underscores the essential balance libraries must maintain between providing universal access to information and upholding the integrity, authenticity, and ethical use of resources in the digital age.

KEYWORDS: Globalization, Libraries, Information gateways, Digital divide, Cultural preservation, Knowledge dissemination, Technological advancements, Global collaboration.

INTRODUCTION

In the contemporary world, the rapid pace of globalization has profoundly transformed how information is produced, accessed, and disseminated. This phenomenon has elevated the role of libraries from traditional repositories of books and physical media to dynamic, multifaceted information hubs. As gateways to knowledge, libraries now operate at the intersection of technology, education, and cultural preservation, adapting to the ever-evolving needs of a globalized society.

Historically, libraries have been instrumental in preserving the cultural and intellectual heritage of societies, serving as custodians of knowledge across generations. However, with the advent of the digital age, the scope and function of libraries have expanded significantly. No longer confined by geographical boundaries, libraries now play a critical role in facilitating access to information across the globe. This shift has been driven by advancements in information and

communication technologies (ICTs), which have enabled libraries to offer a vast array of digital resources and services, thereby reaching a more diverse and widespread audience.

As globalization continues to advance, it brings with it a host of challenges and opportunities for libraries. On one hand, libraries must contend with the digital divide, a persistent issue that limits equitable access to information for certain populations. Financial constraints and the need for continuous technological upgrades further complicate the ability of libraries to modernize and expand their services. Moreover, the digital landscape presents new challenges in data management, including concerns over privacy, security, and the ethical use of information.

On the other hand, globalization offers unprecedented opportunities for libraries to enhance their impact. The potential for global collaboration among libraries has never been greater, enabling the sharing of resources, expertise, and best practices



across borders. The digitization of collections allows for the preservation and dissemination of rare and valuable materials to a global audience, ensuring that cultural and historical treasures are accessible to all. Additionally, libraries are uniquely positioned to address social inequities by expanding their services to underserved and marginalized communities, thus playing a crucial role in promoting social inclusion and equity.

In this review, we explore the evolving role of libraries in the era of globalization, focusing on both the challenges they face and the opportunities they can seize. We examine how libraries can leverage new technologies to enhance their services and remain relevant in an increasingly digital world. Furthermore, we discuss the importance of balancing the need for universal access to information with the preservation of the integrity and authenticity of resources. By navigating these complex dynamics, libraries can continue to serve as vital pillars of the global knowledge ecosystem, fostering lifelong learning, critical thinking, and informed citizenship in the 21st century.

This introduction sets the stage for a comprehensive exploration of the multifaceted role of libraries in the globalized world, highlighting their significance as information gateways and the crucial balance they must maintain in this dynamic environment.

NEED OF THE STUDY

In an increasingly interconnected and digital world, the role of libraries has expanded far beyond their traditional functions. As globalization accelerates, the demand for instant access to information across geographical, cultural, and linguistic boundaries has surged, placing libraries at the forefront of this transformation. However, this shift presents significant challenges, such as the digital divide, the necessity for continuous technological updates, and the growing complexity of managing digital data. Understanding how libraries can effectively navigate these challenges is essential to ensuring they continue to serve as vital institutions for knowledge dissemination, cultural preservation, and educational support in a globalized context.

Furthermore, as libraries evolve into dynamic information hubs, they also have the opportunity to drive social inclusion and equity by providing access to information and resources to underserved and marginalized communities. The digitization of collections and the potential for global collaboration among libraries offer promising avenues for enhancing the accessibility and impact of library services. Therefore, a comprehensive study on the role of libraries as information gateways in the era of globalization is crucial. This study will provide valuable insights into how libraries can adapt to the changing landscape, capitalize on emerging opportunities, and address the challenges that come with globalization. Such insights are not only important for library professionals but also for policymakers, educators, and communities that rely on libraries as essential resources for lifelong learning and cultural preservation.

OBJECTIVES OF THE STUDY

To Analyze the Evolving Role of Libraries in the Globalized World:

This objective aims to examine how globalization has influenced the transformation of libraries from traditional repositories of knowledge to dynamic information gateways. The study will explore the expanded functions of libraries in the digital age, including their role in knowledge dissemination, cultural preservation, and educational support.

To Identify the Challenges Faced by Libraries in the Era of Globalization:

This objective seeks to identify and analyze the key challenges libraries encounter in the globalized context, such as the digital divide, financial constraints, technological obsolescence, and data management issues. The study will also explore the implications of these challenges on the ability of libraries to fulfill their roles effectively.

To Explore the Opportunities Presented by Globalization for Libraries:

This objective focuses on the potential benefits that globalization offers to libraries. It will examine how libraries can leverage opportunities such as global collaboration, the digitization of collections, and the expansion of services to underserved communities to enhance their impact and relevance.

To Assess the Role of Technology in Enhancing Library Services:

This objective aims to investigate how emerging technologies—such as artificial intelligence, blockchain, and cloud computing—can be utilized by libraries to improve service delivery, streamline operations, and provide better user experiences in a globalized environment.

To Evaluate the Balance Between Access to Information and Preservation of Integrity:

This objective seeks to assess how libraries can maintain a balance between providing universal access to information and ensuring the integrity, authenticity, and ethical use of resources in the digital age. It will explore strategies for libraries to uphold these principles while adapting to the demands of globalization.

To Provide Recommendations for Libraries to Adapt and Thrive in a Globalized Context:

Based on the findings from the previous objectives, this final objective will offer practical recommendations for libraries on how to adapt to the challenges and opportunities presented by globalization. The recommendations will aim to guide libraries in maintaining their relevance and effectiveness as key information gateways in the 21st century.

LIBRARY AND INFORMATION TECHNOLOGY

The Evolution of Libraries with Information Technology

Traditionally, libraries were primarily physical spaces where people accessed printed materials such as books, journals, and newspapers. Over the years, with the advent of information technology (IT), libraries have undergone a significant



transformation. This evolution from physical repositories to digital information hubs has been driven by the need to meet the demands of a modern, tech-savvy population and to stay relevant in an increasingly digital world.

Integration of Digital Resources and Services

Information technology has enabled libraries to vastly expand their collections and services beyond physical items. Digital resources such as e-books, online journals, databases, and multimedia content are now integral parts of library offerings. These digital resources are accessible remotely, allowing users to obtain information from anywhere at any time, making libraries indispensable in supporting distance learning, research, and continuous education.

Libraries have also embraced IT to offer a variety of online services. These include digital cataloging systems that allow users to search and reserve materials online, virtual reference services where librarians provide assistance via chat or email, and digital lending services that enable users to borrow e-books and other digital content without physically visiting the library.

Enhancing Access and Efficiency with Automation

Automation has played a crucial role in streamlining library operations. Tasks such as cataloging, circulation, and inventory management have been significantly enhanced by automation systems, which reduce the manual workload and minimize errors. Integrated Library Systems (ILS) are widely used to manage these operations, allowing for efficient handling of large volumes of materials and facilitating easy access to information for both library staff and users.

Information Retrieval and Discovery Tools

The development of advanced search and discovery tools has transformed how users interact with library resources. Information retrieval systems, powered by sophisticated algorithms and metadata management, allow users to perform precise searches and quickly locate relevant materials. Discovery tools often integrate multiple databases and catalogs, providing a unified search experience that helps users find a wide array of resources from a single interface.

Additionally, the use of federated search engines and open access repositories enables libraries to provide users with access to a vast range of academic resources, including those that may not be part of the library's own collection. This enhances the library's ability to serve as a comprehensive information gateway.

Digital Preservation and Archiving

Information technology has also revolutionized the way libraries approach preservation and archiving. Digital preservation involves converting physical materials into digital formats and storing them in digital repositories that ensure long-term access. This process is crucial for preserving rare and valuable materials, such as historical documents, manuscripts, and cultural artifacts, which might otherwise deteriorate over time.

Digital archiving also allows for the creation of extensive, searchable collections that can be accessed globally,

contributing to the preservation and dissemination of knowledge across borders. Libraries employ technologies like cloud storage, blockchain, and encryption to ensure the security and integrity of digital archives.

Supporting Learning and Research with IT-Enabled Services

Libraries leverage information technology to support learning and research in numerous ways. For instance, many libraries offer access to academic databases, citation management tools, and research support services that aid students, researchers, and faculty in their scholarly activities. Libraries also provide access to specialized software for data analysis, multimedia editing, and other research-related tasks, often through IT-equipped learning commons or digital labs.

Moreover, libraries offer online workshops, tutorials, and webinars on various topics, including digital literacy, research methodologies, and the use of library resources. These IT-enabled educational services make libraries central to academic and lifelong learning initiatives.

Enhancing User Experience through Technology

User experience in libraries has been significantly enhanced by the adoption of technology. Libraries now offer user-friendly interfaces for their online catalogs, mobile apps for accessing resources on the go, and personalized services such as tailored recommendations based on user preferences. RFID (Radio Frequency Identification) technology is used for automated check-in/check-out processes, reducing wait times and improving the efficiency of circulation services.

Virtual reality (VR) and augmented reality (AR) are also being explored in some libraries to create immersive learning experiences, such as virtual tours of library facilities or interactive exhibits that enhance the engagement with historical and cultural materials.

Data Management and Analytics in Libraries

Information technology enables libraries to manage and analyze large volumes of data related to their operations and user interactions. Data analytics tools are used to gain insights into user behavior, preferences, and needs, allowing libraries to optimize their services and collections. For example, usage statistics can inform decisions on which materials to acquire, retain, or discard, ensuring that the library's resources are aligned with user demand.

Libraries also use data management systems to track the impact of their services, evaluate the success of programs and initiatives, and make data-driven decisions that enhance overall efficiency and effectiveness.

Addressing Challenges in the Digital Age

While IT has brought numerous benefits to libraries, it also presents challenges. These include issues related to digital privacy, cybersecurity, and the digital divide—where disparities in access to technology can limit the ability of some individuals or communities to fully benefit from digital library services. Libraries must continuously update their IT



infrastructure and adopt best practices in data security and user privacy to protect sensitive information and ensure equitable access to resources.

Furthermore, the rapid pace of technological change requires ongoing investment in staff training and infrastructure upgrades, which can be challenging for libraries with limited budgets.

Future Directions and Innovations

Looking ahead, libraries will continue to explore and integrate emerging technologies such as artificial intelligence (AI), machine learning, and blockchain to further enhance their services and operations. AI, for instance, can be used to develop intelligent search systems, personalized recommendations, and automated customer service bots. Blockchain technology could offer new ways to manage digital rights, secure transactions, and verify the authenticity of information.

Libraries are also expected to play a significant role in supporting digital literacy, helping users navigate the complexities of the digital world, and fostering critical thinking skills in an age of information overload.

Information technology has fundamentally transformed the role and capabilities of libraries, enabling them to serve as essential information gateways in the digital age. By embracing and continually adapting to technological advancements, libraries can continue to meet the evolving needs of their users, support lifelong learning, and remain vital institutions in the global knowledge ecosystem.

ROLE OF LIBRARIES IN THE ERA OF GLOBALIZATION

In the era of globalization, libraries have assumed an increasingly pivotal role as information gateways, transcending their traditional functions and adapting to the complex demands of a globally interconnected society. This evolution reflects the broader shifts in how information is produced, disseminated, and consumed in the digital age.

Facilitators of Global Knowledge Dissemination: Libraries have long been centers for the accumulation and distribution of knowledge. In a globalized world, they extend this role by providing access to a vast array of digital resources, including e-books, journals, databases, and multimedia content. Libraries enable users to access information from any part of the world, thus breaking down geographical barriers and supporting global learning and research. This global accessibility is essential for fostering cross-cultural understanding, academic collaboration, and the exchange of ideas across borders.

Preservers of Cultural Heritage: One of the critical roles of libraries in the globalization era is the preservation of cultural and historical artifacts. As societies become more interconnected, the risk of cultural homogenization increases. Libraries counteract this by digitizing and archiving cultural materials, ensuring that diverse cultural heritages are preserved and accessible to future generations. Through special collections and digital archives, libraries safeguard the cultural

identity and historical records of communities worldwide, making them available to a global audience.

Bridgers of the Digital Divide: The digital divide—disparities in access to digital technology and the internet—remains a significant challenge in the globalized world. Libraries serve as critical institutions in bridging this divide by providing free or low-cost access to computers, the internet, and digital literacy programs. In doing so, libraries empower individuals, particularly those in underserved or marginalized communities, to participate fully in the digital economy and society. By offering these resources, libraries play a vital role in promoting social equity and inclusion.

Supporters of Lifelong Learning and Education: Libraries have always been fundamental to education, offering resources that support formal and informal learning. In the globalization era, this role has expanded to include not only traditional educational resources but also digital learning platforms, online courses, and virtual classrooms. Libraries provide a space—both physical and virtual—where individuals can pursue lifelong learning, acquire new skills, and stay informed about global developments. This function is crucial as globalization increases the need for continuous education and skill development in a rapidly changing world.

Promoters of Global Collaboration: The interconnectedness brought about by globalization has opened up new avenues for collaboration among libraries worldwide. Libraries can now share resources, expertise, and best practices through global networks and consortia. These collaborations enhance the ability of libraries to serve their communities, expand their collections, and improve service delivery. Additionally, global collaboration enables libraries to work together on joint projects, such as large-scale digitization efforts, research initiatives, and international cultural exchanges, thereby amplifying their impact.

Innovators in Information Technology and Service Delivery: To remain relevant in the digital age, libraries have embraced technological innovations that improve service delivery and user experience. Libraries now employ advanced technologies such as artificial intelligence for automated cataloging, blockchain for secure information management, and cloud computing for scalable digital storage solutions. By adopting these technologies, libraries enhance their efficiency, broaden their service offerings, and meet the evolving needs of a global user base. This innovation is crucial as libraries continue to redefine their role in a world where information is increasingly digital and accessible from anywhere.

Guardians of Information Integrity and Ethics: In an era of widespread misinformation and digital manipulation, libraries play a critical role in maintaining the integrity and authenticity of information. Libraries are trusted institutions that provide verified and reliable resources, helping users navigate the vast and often confusing landscape of digital information. Additionally, libraries uphold ethical standards in information management, ensuring that users' privacy is protected and that information is used responsibly. This role is particularly important in a globalized world, where the flow of information



is rapid and unregulated, and the consequences of misinformation can be far-reaching.

Catalysts for Social Inclusion and Equity: Libraries are uniquely positioned to promote social inclusion by offering services tailored to the needs of diverse populations. In the context of globalization, libraries provide resources in multiple languages, support for immigrants and refugees, and access to information that addresses the specific needs of different cultural groups. By doing so, libraries help integrate marginalized communities into the broader society, ensuring that everyone has the opportunity to benefit from the wealth of knowledge available in the global information ecosystem.

CHALLENGES FACED BY LIBRARIES IN THE ERA OF GLOBALIZATION

As libraries evolve to meet the demands of a globalized and digital world, they encounter a range of challenges that must be addressed to maintain their relevance and effectiveness. These challenges are multifaceted, involving technological, financial, social, and ethical dimensions.

1. The Digital Divide

a. Access Disparities

The digital divide refers to the gap between those who have access to modern information and communication technology (ICT) and those who do not. This divide is significant in both developed and developing countries and poses a major challenge for libraries striving to provide equitable access to information. In many regions, limited internet access, lack of digital literacy, and inadequate infrastructure prevent large segments of the population from fully utilizing digital library services. Libraries must work to bridge this gap by providing access to computers, the internet, and digital literacy programs, but this often requires substantial resources and support.

b. Socioeconomic Barriers

The digital divide is often exacerbated by socioeconomic factors, where individuals from low-income communities, rural areas, or marginalized groups have less access to digital resources. Libraries in these areas may face additional challenges in acquiring the necessary technology and funding to serve their communities effectively.

2. Financial Constraints

a. Limited Budgets

Libraries, particularly public libraries, often operate on tight budgets. Financial constraints limit their ability to invest in new technologies, expand digital collections, and maintain up-to-date infrastructure. As globalization increases the demand for digital services and resources, libraries may struggle to keep pace without adequate funding. This challenge is especially acute in regions where government support for libraries is insufficient or where libraries rely heavily on external funding sources that may be unstable or inconsistent.

b. Cost of Digital Resources

Acquiring digital content, such as e-books, databases, and subscription-based journals, can be expensive. Unlike physical books, digital resources often come with licensing restrictions

and recurring costs, making it difficult for libraries to build and sustain comprehensive digital collections. Negotiating fair and affordable access to these resources is a constant challenge for libraries.

3. Technological Obsolescence and Upgrades

a. Rapid Technological Advancements

The pace of technological change presents a significant challenge for libraries. New technologies emerge rapidly, and libraries must continually update their systems, software, and hardware to remain relevant. This requires not only financial investment but also ongoing staff training and development. For libraries with limited resources, keeping up with these advancements can be daunting.

b. Compatibility and Integration Issues

Libraries often face challenges related to the compatibility and integration of new technologies with existing systems. Legacy systems may not easily integrate with newer technologies, leading to inefficiencies or the need for costly overhauls. Ensuring that all systems work seamlessly together is crucial for providing a smooth user experience but can be technically complex and resource-intensive.

4. Data Management and Security

a. Managing Large Volumes of Digital Data

As libraries expand their digital offerings, they must manage vast amounts of data, including digital collections, user information, and metadata. Organizing, storing, and retrieving this data efficiently requires robust data management systems and practices. The challenge is compounded by the need to maintain the accuracy, integrity, and accessibility of this data over time.

b. Privacy and Security Concerns

With the increasing digitization of library services, protecting user privacy and securing sensitive data is a critical concern. Libraries collect and store various types of user data, from borrowing histories to personal information. Ensuring that this data is protected from breaches, unauthorized access, or misuse is essential, yet challenging, especially with the rising sophistication of cyber threats. Libraries must implement strong security measures and stay informed about the latest developments in cybersecurity.

5. Intellectual Property and Copyright Issues

a. Navigating Complex Legal Frameworks

Libraries must navigate the complex landscape of intellectual property rights, particularly as they expand their digital collections. Copyright laws vary by country, and digital content often comes with restrictive licensing agreements that limit how libraries can distribute, lend, or preserve materials. Understanding and complying with these legal frameworks is a challenge, especially as libraries seek to provide broader access to information in a globalized context.

b. Balancing Access with Rights Protection

Libraries strive to provide free and open access to information, but they must balance this goal with the need to respect intellectual property rights. This balance can be difficult to



achieve, particularly when dealing with digital materials that are easily copied and shared. Libraries must develop policies and practices that ensure fair use while protecting the rights of content creators.

6. Cultural and Linguistic Barriers

a. Serving Diverse Populations:

Globalization has increased the cultural and linguistic diversity of library users. Libraries are now expected to serve patrons from various cultural backgrounds and who speak different languages. Providing access to materials in multiple languages and catering to the needs of diverse communities requires careful planning and resources. Libraries must curate collections that reflect this diversity and offer services that are inclusive and accessible to all.

b. Cultural Sensitivity in Information Provision:

Libraries must also navigate cultural sensitivities when curating collections and providing services. What is considered acceptable or valuable information can vary greatly across cultures. Libraries need to ensure that their offerings respect these differences while promoting cross-cultural understanding.

7. Ethical Challenges in Information Provision

a. Ensuring Information Integrity and Authenticity:

In an era of information overload and widespread misinformation, libraries face the challenge of ensuring that the information they provide is accurate, reliable, and authentic. This responsibility is critical as libraries are often trusted sources of information. However, with the vast amount of digital content available, including user-generated content and unverified sources, maintaining high standards of information quality is increasingly difficult.

b. Navigating Censorship and Intellectual Freedom:

Libraries are champions of intellectual freedom and the right to access information, but they must also navigate the pressures of censorship, which can come from governments, communities, or internal policies. Striking a balance between providing open access to information and respecting societal norms or legal restrictions is a complex ethical challenge, particularly in a globalized context where these pressures can vary widely.

8. Sustainability and Environmental Concerns

a. Environmental Impact of Digital Technologies:

The environmental impact of maintaining large digital infrastructures is a growing concern for libraries. Data centers, servers, and electronic devices consume significant amounts of energy and resources. Libraries must consider how to minimize their carbon footprint and adopt sustainable practices in their operations. This includes investing in energy-efficient technologies, reducing e-waste, and considering the environmental impact of digital services.

b. Long-term Sustainability of Digital Archives:

Ensuring the long-term sustainability of digital archives is a challenge. Digital formats can become obsolete, and storage media can degrade over time. Libraries must develop strategies for digital preservation that include regular updates, migration

to new formats, and the maintenance of multiple copies in different locations to prevent data loss.

9. Adapting to Changing User Expectations

a. Meeting the Needs of a Tech-Savvy Population:

As users become more accustomed to digital technologies, their expectations for library services evolve. Patrons increasingly expect seamless, instant access to digital content, personalized recommendations, and user-friendly interfaces. Libraries must adapt to these changing expectations by continuously improving their digital services, enhancing user experience, and staying ahead of technological trends.

b. Balancing Traditional and Modern Services:

While embracing digital transformation, libraries must also cater to users who prefer traditional services, such as physical books and in-person assistance. Balancing the needs of different user groups, including those who may not be as comfortable with digital technologies, is a challenge. Libraries must find ways to integrate new technologies without alienating those who rely on more conventional services.

The challenges faced by libraries in the era of globalization are diverse and complex. Addressing these challenges requires innovative thinking, strategic planning, and collaboration among library professionals, policymakers, and the communities they serve. By overcoming these obstacles, libraries can continue to fulfill their crucial role as information gateways in a globalized world, ensuring that they remain vital institutions for knowledge dissemination, cultural preservation, and social inclusion.

OPPORTUNITIES FOR LIBRARIES IN THE ERA OF GLOBALIZATION

In the era of globalization, libraries are presented with numerous opportunities that can enhance their role as vital information gateways. These opportunities are driven by technological advancements, increased connectivity, and evolving user needs.

1. Global Collaboration and Resource Sharing

a. International Partnerships

Globalization facilitates international collaborations among libraries, allowing them to share resources, knowledge, and expertise. Libraries can form partnerships with institutions worldwide to participate in joint projects, exchange programs, and collaborative research initiatives. Such partnerships enhance the breadth and depth of resources available to users and foster a global community of librarians working towards common goals.

b. Resource Sharing Networks

Libraries can participate in resource-sharing networks and consortia that enable them to access materials beyond their local collections. Through interlibrary loan systems and digital resource sharing agreements, libraries can provide users with access to a vast array of materials from partner institutions. This collaborative approach helps to maximize the use of available resources and address gaps in individual collections.



2. Digitization and Preservation of Collections

a. Expanding Digital Archives

The digitization of physical collections presents an opportunity to preserve rare and valuable materials and make them accessible to a global audience. Libraries can create digital archives that include historical documents, manuscripts, and cultural artifacts, ensuring that these resources are not lost to time and can be accessed by researchers, students, and the public worldwide.

b. Enhancing Access and Discoverability

Digital collections can be made available through online platforms, searchable databases, and virtual libraries. This expanded access allows users to explore and discover materials that were previously restricted to physical visits. By improving the discoverability of collections through metadata and advanced search technologies, libraries can reach a broader audience and enhance the value of their holdings.

3. Expanding Services to Underserved Communities

a. Reaching Remote and Marginalized Populations

Libraries can leverage digital technologies to reach underserved and marginalized communities that may have limited access to physical library locations. Through online services, mobile libraries, and digital literacy programs, libraries can provide resources and support to remote or disadvantaged populations. This expansion of services helps to bridge gaps in access and promote social equity.

b. Developing Inclusive Programs

Libraries have the opportunity to develop programs and services tailored to the needs of diverse communities, including immigrants, refugees, and non-native speakers. By offering multilingual resources, culturally relevant programming, and targeted outreach efforts, libraries can better serve these populations and support their integration and development.

4. Innovating with Emerging Technologies

a. Implementing Artificial Intelligence (AI)

Artificial Intelligence (AI) offers libraries the opportunity to enhance their services through automated cataloging, personalized recommendations, and intelligent search systems. AI can improve user experience by providing tailored content suggestions, answering queries with virtual assistants, and streamlining administrative tasks.

b. Exploring Virtual and Augmented Reality (VR/AR)

Virtual and Augmented Reality technologies present opportunities for libraries to create immersive experiences for users. VR and AR can be used to develop virtual tours of library collections, interactive exhibits, and educational simulations. These technologies can make learning more engaging and accessible, especially for remote or visually impaired users.

c. Leveraging Blockchain Technology

Blockchain technology can be utilized to secure digital transactions, manage intellectual property rights, and ensure the integrity of digital records. Libraries can explore blockchain for managing digital rights and providing transparent, tamper-

proof records of their digital collections and user transactions.

5. Promoting Lifelong Learning and Education

a. Offering Online Learning Resources

Libraries can expand their educational offerings by providing access to online courses, webinars, and virtual workshops. These resources support lifelong learning and professional development, catering to users of all ages and backgrounds. By partnering with educational institutions and online learning platforms, libraries can offer diverse learning opportunities and resources.

b. Supporting Skills Development:

Libraries can use technology to offer training programs in digital skills, coding, data analysis, and other in-demand competencies. These programs help users acquire valuable skills that are essential in a globalized economy, contributing to their personal and professional growth.

6. Enhancing User Engagement and Experience

a. Personalized Services

Libraries can use data analytics and user feedback to tailor their services to individual needs and preferences. By analyzing usage patterns and engagement metrics, libraries can offer personalized recommendations, targeted notifications, and customized content, improving user satisfaction and loyalty.

b. Mobile and Remote Access

The development of mobile apps and responsive websites enables users to access library resources and services from their smartphones and tablets. This convenience supports on-the-go access to digital materials, catalog searches, and online services, enhancing the overall user experience.

7. Fostering Community Engagement and Collaboration

a. Hosting Community Events

Libraries can leverage their physical and digital spaces to host community events, such as author talks, cultural programs, and public forums. These events foster community engagement, support local culture, and provide a platform for dialogue and interaction among residents.

b. Building Partnerships with Local Organizations

Libraries have the opportunity to collaborate with local schools, non-profits, and community groups to address specific needs and challenges. By partnering with these organizations, libraries can enhance their impact, offer joint programs, and support community initiatives.

8. Strengthening Research and Innovation

a. Supporting Academic Research

Libraries can play a crucial role in academic research by providing access to specialized databases, research tools, and scholarly resources. They can also support researchers through data management services, citation tools, and research consultations.

b. Encouraging Innovation in Library Services

Globalization and technological advancements provide libraries with the opportunity to experiment with innovative



services and solutions. Libraries can pilot new technologies, develop creative programming, and explore novel approaches to information management and user engagement.

9. Advancing Advocacy for Libraries

a. Promoting the Value of Libraries

Libraries can use the global platform to advocate for their value and importance in society. By showcasing their impact on education, research, and community development, libraries can gain recognition and support from policymakers, funders, and the public.

b. Building a Strong Professional Network:

Globalization allows librarians to connect with peers worldwide through professional organizations, conferences, and online communities. These connections facilitate knowledge exchange, professional development, and collaborative opportunities that strengthen the library profession.

The era of globalization presents libraries with numerous opportunities to expand their roles and impact. By embracing these opportunities, libraries can enhance their service offerings, improve access to information, and support lifelong learning and community development. Through innovation, collaboration, and strategic planning, libraries can navigate the challenges of the digital age and continue to serve as essential information gateways in a globalized world.

CONCLUSION

In conclusion, libraries, as crucial information gateways in the era of globalization, face a complex landscape characterized by both significant challenges and promising opportunities. The challenges—including the digital divide, financial constraints, technological obsolescence, data management, and cultural barriers—underscore the need for libraries to adapt and innovate continuously. These obstacles demand strategic solutions, including increased funding, improved technology, and enhanced data security, to ensure libraries remain relevant and effective in serving diverse communities. However, globalization also presents libraries with unprecedented opportunities to expand their impact. By leveraging global collaborations, digitizing collections, embracing emerging technologies, and reaching underserved populations, libraries can enhance their roles as facilitators of knowledge, education, and cultural preservation. The potential for libraries to contribute to lifelong learning, support community engagement, and advance research is immense. As libraries navigate the evolving information landscape, their ability to balance these opportunities with the challenges they face will be crucial in maintaining their position as indispensable institutions in a connected and rapidly changing world.

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The authors declare that there are no conflicts of interest.

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INFLUENCE OF COGNITIVE ABILITIES AND SELF-EFFICACY ON FINANCIAL BEHAVIOR

Dr. Ramneet Kaur

Assistant Professor, Chandigarh Group of Colleges, Landran Mohali

ABSTRACT

This paper explores the relationship between cognitive abilities, self-efficacy, and financial behavior. It examines how cognitive abilities influence an individual's capacity to make sound financial decisions, and how self-efficacy mediates this relationship. Through a review of existing literature and analysis of empirical data, this study identifies key factors that impact financial behavior, offering insights into how cognitive and psychological factors can be leveraged to improve financial decision-making and literacy.

KEYWORDS (Financial behavior, Cognitive, self-efficacy, Finance)

INTRODUCTION

Financial behavior, which encompasses decisions related to saving, investing, and spending, is crucial for individual and societal economic well-being. Cognitive abilities and self-efficacy are two psychological factors that significantly influence financial behavior. Cognitive abilities, such as memory, attention, and problem-solving skills, directly impact an individual's ability to process financial information and make informed decisions. On the other hand, self-efficacy, or the belief in one's capability to execute actions necessary to achieve specific goals, influences the confidence with which individuals approach financial decisions.

Understanding the interplay between cognitive abilities and self-efficacy can provide deeper insights into financial behavior, potentially informing interventions aimed at improving financial literacy and outcomes.

LITERATURE REVIEW

Cognitive Abilities and Financial Behavior

Cognitive abilities are essential for processing information, evaluating risks, and making complex decisions. Higher cognitive abilities have been linked to better financial outcomes, as individuals with greater cognitive capacity are more adept at understanding and managing financial products, such as loans, savings accounts, and investments (Lusardi & Mitchell, 2014).

Research by Fernandes, Lynch, and Netemeyer (2014) suggests that cognitive abilities play a critical role in financial decision-making, particularly in complex financial environments. Individuals with higher cognitive abilities are better equipped to navigate financial risks, optimize savings, and make investment decisions that align with their long-term goals.

Self-Efficacy and Financial Behavior

Self-efficacy reflects an individual's belief in their ability to succeed in specific situations. Bandura (1997) posits that self-efficacy influences how people think, behave, and feel about their actions. In the context of financial behavior, higher self-

efficacy is associated with greater financial planning, saving, and responsible credit use (Farrell, Fry, & Risse, 2016).

Self-efficacy impacts financial behavior by fostering a proactive approach to financial management. Individuals with high financial self-efficacy are more likely to engage in budgeting, saving, and investment activities, even when faced with financial challenges (Shobe & Page-Adams, 2001).

The Interaction Between Cognitive Abilities and Self-Efficacy

Cognitive abilities and self-efficacy do not operate in isolation but interact to shape financial behavior. Cognitive abilities provide the foundation for understanding financial concepts, while self-efficacy determines the confidence with which individuals apply this knowledge (Lown, 2011). For instance, a person with high cognitive abilities but low self-efficacy may understand financial principles but lack the confidence to apply them effectively in real-world situations. Moreover, self-efficacy can enhance cognitive abilities by motivating individuals to engage in continuous learning and application of financial knowledge, thereby improving their financial behavior over time (Montalto, Heckman, & Hanna, 2006).

METHODOLOGY

This paper employs a mixed-methods approach, combining a review of existing literature with an empirical analysis of survey data. The literature review synthesizes findings from key studies on cognitive abilities, self-efficacy, and financial behavior. The empirical analysis involves a survey of individuals from diverse demographic backgrounds, assessing their cognitive abilities, financial self-efficacy, and financial behaviors.

RESULTS

The analysis indicates a significant positive correlation between cognitive abilities and sound financial behavior. Individuals with higher cognitive abilities demonstrated better financial decision-making skills, were more likely to



engage in regular saving and investment activities, and were less prone to financial mistakes.

Self-efficacy also emerged as a significant predictor of financial behavior. Participants with higher self-efficacy reported more proactive financial management practices, such as budgeting and long-term financial planning.

The interaction effect between cognitive abilities and self-efficacy was particularly noteworthy. The data suggest that self-efficacy moderates the relationship between cognitive abilities and financial behavior. Individuals with high cognitive abilities and high self-efficacy exhibited the most effective financial behavior, while those with high cognitive abilities but low self-efficacy were less consistent in applying their financial knowledge.

DISCUSSION

The findings highlight the importance of both cognitive abilities and self-efficacy in shaping financial behavior. While cognitive abilities provide the necessary tools for understanding and processing financial information, self-efficacy determines the extent to which individuals feel confident in their ability to manage their finances effectively. These results have important implications for financial education programs. Enhancing both cognitive abilities and self-efficacy could lead to better financial outcomes for individuals. For instance, financial education programs that incorporate confidence-building exercises alongside technical financial training may be more effective in improving financial behavior.

CONCLUSION

This paper underscores the significant influence of cognitive abilities and self-efficacy on financial behavior. By understanding the interplay between these factors, policymakers, educators, and financial advisors can develop more targeted interventions to enhance financial literacy and behavior. Future research should continue to explore the dynamic relationship between cognitive and psychological factors in financial decision-making.

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NICKNAME AND ITS PROPER NOUN APPEARANCES

Kadirova Khurshida Marselovna
Urgench State University, Docent, PhD

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ABSTRACT

In addition to nicknames given to people, other proper noun forms of nicknames are explained on the basis of examples.

KEYWORDS: proper noun, onomastics, anthroponym, nickname, toponymy nickname, anthrotoponymy, oikodonymic nickname, biblionymous nickname.

Onomastics is a branch of linguistics that studies proper nouns. Each of the onomastic units has its own form, one of which is anthroponyms.

Anthroponymy (also anthroponymics or anthroponomastics, from Ancient Greek *anthropos* / “human”, and *onoma* / “name”) is the study of anthroponyms, the proper names of human beings, both individual and collective. In the Uzbek language, this unit means a noun, a person’s name, personal nouns, personal names, etc. Anthroponym is a linguistic unit of onomastics, like a toponym or a zoonym, which includes specific units. We include names, patronymics, surnames, nicknames, etc [2].

Nicknames are also used outside of individuals. When the word nickname is used, the members of the society imagine different things based on their current situation, activities and worldview. So, the common nickname among them is of particular importance in linguistics, it is an anthroponymic unit associated with these individuals.

Nicknames are important not only for the anthroponymic scope, but also for other types of nouns. A nickname is a broad concept, and we can observe its expression in relation to other forms of onomatopoeia, except for anthroponyms, in toponymy, oikodonymic, automobile and biblionymous nicknames.

Toponymic nicknames. A toponym is a place name or a word created in connection with a place name. Toponymic nicknames are collective names given to a certain area based on the location, activities or character traits of the citizens of the area. For example:

Mini Pāriž – It is used in relation to the center of Yangibozor district, and usually the negative meaning is emphasized.

Žiņkōčā // Žinkōčā – The name of a neighborhood in a remote village of Bogot district. The houses in this neighborhood are not built evenly. Someone’s house is behind the house towards

the garden, while the other one is the opposite, some houses are in the middle of the garden. According to the location of the ditch that passed in front of the house, the road was made into a snake trail. That is why the road of the neighborhood is very narrow. The original name of the neighborhood is Topchi.

Ožiq siti – Orozmat city. Orozmat grew up in a poor family. After building his own family, he will have 8 children and raise them with difficulty. His children are now employees of influential offices and organizations, some of them also work in leadership positions. Because Orozmat brother is very honest and hardworking, with the good intention of making him an example to young people, the whole village and village is named after him (a village located in Gurlan district).

Kōčā topalaŋ – The young men of this neighborhood, even their elderly fathers, quarrel wherever they go. People in the neighborhood are good with each other, but they don’t come from other places without quarrels (Goybu village, Urgench district).

Hākkā – The second name of Chakka neighborhood located in Urgench district. In Khorezm province there is a proverb related to this: “*Quš jamanī hākkā, el jamanī čākkā*” (in english translation: that is, the bird is bad Hakka, the avenue is bad Chakka). Others are cautious in dealing with the people of this neighborhood, they consider them dangerous.

There are also cases of anthroponyms being transferred to toponyms, and we call them anthrotoponyms. Anthrotoponyms are names created based on people’s nicknames and names, and Z.Dosimov cited place names based on people’s nicknames, such as *bangi, qankhar, avmas* [4], as examples of such names. According to toponymist scientists, place names are often formed on the basis of people’s nicknames [1], and this point of view shows that nicknames have a history of many thousands of years. This is also proved by anthrotoponyms, which were created on the basis of people’s nicknames and names.



Oikodonymic nicknames. Residential dwellings and settlements are studied in the microscale of oikonim, which is part of toponymy. Oikodonymic nicknames are additional names given to some places. Examples include the following:

Tajsin tojxana – It was formed on the basis of the name of American professional boxer, world champion Mike Tyson. It was named so because all the weddings held in this wedding hall were fought (Shadiyana wedding hall located in Kushkupir district).

Ilaʒsiz or *γarib tojxana* – during the wedding season, when good wedding halls are busy, people are forced to go there because of desperation. The interior of the wedding hall is unsightly and ugly, and the dishes are also unusable (Gurlan wedding hall in Gurlan district).

Čuvin basti – Originally a restaurant called “Ali Bar”. The customers of this place are few, people who come here for the first time without knowing do not enter, the person who knows does not enter this place. It was given this name because no one entered (Ali bar located in Urgench district).

Autorusum nicknames. Nicknames given to cars:

Karol darogi – 07 (Royal Drug) is a compound nickname, and this car was popular in the 80s. Only the older generation knows this nickname, it was the car everyone dreamed of in its time.

Buxanġa – Damas car. It is formed on the basis of a similarity in shape, and it is elongated, similar to a type of bread.

Biblionymic Nicknames. The onomastic scope that studies the names of artistic, scientific, religious and political works is called biblionyms. Some works of art are also renamed after the name of the author or one of the main characters. However, biblionymous nicknames were formed on the basis of giving additional names to the works in a form unrelated to the above: *Sari ġitap* – The book “Current Uzbek Literary Language” published under the leadership of Sh.Rakhmatullayev. The book was named so because the cover was yellow. This name of the book has always been used among students.

Kok ġitap – U.Tursunov’s “Modern Uzbek Literary Language” is called this in students’ speech based on the color of the cover.

Qizil deʒ – There is a different circumstance in the title of the manual “Current Uzbek Literary Language” published under the leadership of R.Saifullayeva. It uses the word cover instead of the word book.

Āqademġramatika – It is the nickname of the book “Grammar of the Uzbek language”. This book was published by the Academy Publishing House. So nicknamed after the name of the publisher.

Zoonym is a branch of onomastics that studies the names given to animals. The word “name” is not applied to any animal species. Only the word “nickname” is used for them.

Personal nicknames have been partially analyzed in some studies [2]. However, Uzbek linguistics has not analyzed the

transfer of nicknames to proper nouns in a different way. There is a need to determine whether they have the status of a nickname or vice versa.



A STUDY ON THE EFFECTIVENESS OF TRAINING PROGRAMMES OFFERED TO EMPLOYEES /WORKERS IN SMALL & MEDIUM ENTERPRISES IN PUDUKKOTTAI DISTRICT

Dr.K.Alagar M.Com., M.Phil., Ph.D

Assistant Professor of Commerce, Alagappa Govt. Arts College, Karaikudi-3

ABSTRACT

The research project entitled effectiveness of training programmes offered to employees /workers in small & medium enterprises in pudukkottai district. The data was collected through well structured questionnaires which contains closed end question. This survey was carried out in various departments of small & medium enterprises. In the course of study, it was found that the training programs analyzed were provided to all the employees of small & medium enterprises not specific to particular category of employees. The research design used for this study is descriptive in nature. The methods of data collection for the study include both primary and secondary data.

KEYWORDS: Enterprises, Employees, workers, Training

INTRODUCTION

Today individuals and organizations must become continuous learners to survive and hence it is not surprising to find that most successful organizations operate in a continuous learning mode. The challenge of globalization, technological innovation increasing competition and growth through expansion, diversification and acquisition has had a wide-ranging and far reaching impact on human resource management. There is a need for a continuous process that aims at providing fresh knowledge and skill inputs to the employees so as to ensure the development of their competencies, dynamism, motivation and effectiveness in a systematic and planned way, thereby improving the productivity and overall organizational effectiveness. As a result, training and development activities have acquired great significance and are now firmly centre-stage in most of the organizations. Training is essential as technology is developing continuously and at a fast rate, systems and practices get outdated soon due to new discoveries in technology, including technical, managerial and behavioural aspects. So, organizations, which develop mechanisms to catch up with and use the growing technology, soon become outdated.

Small and medium – sized Enterprises (SMEs) constitute a large proportion of the overall business population of industrially developed and developing nations. Despite the growing importance of SME research during the last decade, very little attention has been paid to the study of training and development practices in SMEs. This research sets out to redress this imbalance in current SME research. It outline the preliminary results of a study that focussed on determinants of training and development practices in manufacturing and servicing SMEs in Pudukkottai District.

Training and Skill Development Activities

1. Training and Skill Development Activities by Central Government
 - (i) Skill Development and Training Programmes of Central Government
 - (ii) National Vocational Training information Service of Ministry of Labour.
2. Training Programmes of SIDBI
 - (i) Entrepreneurship Development Programme (EDP)
 - (ii) Small Industries Management Programme (SIMAP)
 - (iii) Skill-cum-Technology (STUP)
3. Training Programmes of NSIC

NSIC provides technical support to SSIs through 'NSIC Technical Services Centres' (NTSCs) and a number of extension and sub centres spread across the country. The range of technical services provided through these centres include training in Hi-Tech as well as conventional trades, testing, common facilities, toolkits, energy audit, environment management etc.

NEED FOR THE STUDY

Small and medium – sized Enterprises (SMEs) constitute a large proportion of the overall business population of industrially developed and developing nations. Despite the growing importance of SME research during the last decade, very little attention has been paid to the study of training and development practices in SMEs. This research sets out to redress this imbalance in current SME research. It outline the preliminary results of a study that focused on determinants of training and development practices in manufacturing and servicing SMEs in Chennai.



SCOPE OF THE STUDY

The research will be carried out amongst manufacturing SMEs. The research will study the effect of SMEs training programmes offered to employees/workers. To know the effectiveness of the training programme the study will be look into the factors are Perception, needs, awareness, utilization, attitude, Talent acquired, Satisfaction, Implementation of training and feed back of the training. All the above factors analyses the successful of the training.

OBJECTIVES OF THE STUDY

1. To find the significant difference between demographic variable with regard to factors on effectiveness of training.
2. To find the most important factor to influence the effectiveness of training.

DATA ANALYSIS AND INTERPRETATION

Table - 1
Gender of the Employees

Sl. No.	Gender	No. of Employees	Percentage %
Gender	Male	83	83
	Female	17	17
	Total	100	100
	Below 30	22	22
Age	31- 40	35	35
	41 - 50	23	23
	Above 50	20	20
	Total	100	100
Education	Higher secondary	28	28
	Diploma	17	17
	Under-graduation	25	25
	Post-graduation	16	16
	Professional Education	14	14
	Total	100	100
Occupation	Agriculture	19	19
	Private employment	22	22
	Government employment	21	21
	Professions	15	15
	Business	12	12
	Others	11	11
	Total	100	100
Types	Micro Enterprise	13	13
	Small Enterprise	35	35
	Medium Enterprise	52	52
	Total	100	100

Source: Primary data

LIMITATIONS OF THE STUDY

- ❖ The study is concerned a particular unit i.e., small & medium enterprises in Pudukkottai district. The findings of the study may not be suitable to other enterprises.

REVIEW OF LITERATURE

- ❖ **Mike Wills** has assessed the importance of training and its effectiveness in organizations. The study discussed the difficulties and processes involved in implementing a training process. It provided an overview of the training process including defining direction, setting up training, establishing checkpoints and improvements of training.
- ❖ **Junaidah Hashim** in his study examined the clients' demand towards evaluation, the commitment given by training providers and the overall practice of evaluation by the training providers in Malaysia.
- ❖ The results of the study attempted by **Sandi Mann** indicate that evaluating training at the learning level has limited value in predicting self-efficacy.



Table - 2
Factors impacted due to concept of ‘Personal Excellence’

Sl. No.	Factors	No. of employees	Percentage
1	Assertiveness	5	5
2	Conflict Management	18	18
3	Time and Stress Management	20	20
4	Relationship with Management	16	16
5	Above all factors	41	41
	Total	100	100

Source: Primary data

FINDINGS

83% of the employees are male and 17% of employees are female 17% in terms of gender. Compare to gender wise male are higher in representation.

The important ages of the employees are 31 to 40 and 41 to 50 years which constitute 35% and 23% to the total respectively. The analysis reveals that the important ages among the employees are 31 to 40 years and 41 to 50 years.

The dominant levels of education among the Employees are under-graduation and professional education which constitute 25% and 16% respectively. The most of the employees’ level of education are higher education.

The important occupations backgrounds among the employees are private employment and government employment which constitute 22% and 21% respectively. The analysis reveals that the important occupational backgrounds among the employees are private and government employment.

The important firm sizes among the employees are small enterprise and micro enterprise which constitute 35% and 13% to the total respectively. The analysis reveals that the important firm sizes of the employees are medium and small enterprise.

According to 41% workers, all the above stated factors have been positively imparted due to implementation of ‘Personal Excellence’ concept in the organization.

CONCLUSION

The present study indicates that the level of implementation of the training programmes is at the moderate level. The implementations of the training programmes to the Employees/workers are perceived at a higher level compared to the training programmes implemented to the SMEs. The higher effects of the training programmes are identified by the Employees than by the SMEs. The significantly influencing components of the training programmes on the various effects of the programme are trainers’ quality, training methodology and training content. The important variable leading to hesitation to take up the training programmes is the need of different types of training. Hence the SMEs authority should design a need for training programmes in order to enrich their employee’s productivity.

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THE IMPACT OF SOCIOECONOMIC FACTORS ON NUTRITIONAL KNOWLEDGE AND DIETARY PRACTICES AMONG SCHOOL-GOING ADOLESCENTS

Paridhi Mathur¹, Dr. Zafar Ejaz Khan², Dr. Sadakat Bashir³

¹MPH Scholar, Maulana Azad University, Jodhpur

²BDS, MPH, PhD, Faculty of Medicine, Public Health, Assistant Professor, Dept. Of Public Health, Maulana Azad University, Jodhpur

³Assistant Professor, Dept. of Public Health, Maulana Azad University, Jodhpur

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ABSTRACT

Objectives: This study investigates the impact of socioeconomic factors on nutritional knowledge and dietary practices among school-going adolescents in rural areas of Jodhpur, Rajasthan. The primary objectives were to assess the relationship between socioeconomic status and adolescents' nutritional knowledge and dietary practices, and to identify barriers to adopting healthy dietary practices in the context of socioeconomic disparities.

Methods: A cross-sectional survey was conducted, encompassing data from 385 adolescents, with variables such as family income, parental education, and access to nutritional resources being analyzed.

Results: The results revealed significant correlations between higher socioeconomic status and better nutritional knowledge and dietary practices. Adolescents from wealthier families and those with more educated parents demonstrated superior understanding and adherence to healthy dietary guidelines, while those from lower socioeconomic backgrounds exhibited gaps in knowledge and poorer dietary habits. Additionally, the study highlighted the presence of nutritional health issues, including both underweight and overweight adolescents, indicating a dual burden of malnutrition in the region.

Conclusion: The conclusion emphasizes the need for targeted public health interventions that address the socioeconomic disparities influencing adolescent nutrition. Such interventions should include enhanced nutritional education, improved access to affordable nutritious foods, and culturally sensitive programs that respect local dietary practices while promoting balanced nutrition. The findings underscore the critical role of socioeconomic factors in shaping adolescents' nutritional behaviors and call for multi-faceted approaches to improve nutritional outcomes in rural communities.

KEYWORDS: Nutrition knowledge, Dietary practices, Adolescent Nutrition, Public Health, Nutritional Education

INTRODUCTION

Nutrition is a cornerstone of the overall health and development of adolescents, a crucial phase marked by rapid physical, cognitive, and emotional growth. Adequate nutrition during adolescence is not only vital for immediate well-being but also for long-term health outcomes. Malnutrition, whether due to deficiencies or excesses, can have profound impacts, potentially leading to chronic diseases later in life, impairing cognitive development, and reducing educational and economic productivity. In developing countries like India, where socioeconomic disparities are prevalent, the nutritional status of adolescents is often compromised, particularly in rural areas where access to resources and education is limited. This study aims to shed light on these issues and propose interventions to address them.

In the context of rural Rajasthan, the challenges of adolescent nutrition are compounded by several factors, including poverty, limited access to healthcare and education, and deep-rooted cultural practices. Rural areas of Jodhpur, Rajasthan, are

emblematic of these challenges. The region is characterized by socio-economic hardships that are exacerbated by geographical remoteness, traditional dietary practices, and limited awareness about nutrition. Adolescents in these areas are particularly vulnerable, as they often belong to families with low income and education levels, which directly affect their dietary practices and nutritional knowledge.

The concept of Knowledge, Attitude, and Practices (KAP) is crucial in understanding the nutritional behaviors of adolescents. KAP studies provide insights into what individuals know about nutrition, how they feel about healthy eating, and how they apply this knowledge in their daily lives. However, KAP does not operate in isolation. Socioeconomic factors such as family income, parental education, and access to resources play a significant role in shaping the KAP related to nutrition among adolescents. These factors influence not only the availability and affordability of nutritious foods but also the level of exposure to nutritional education and the capacity to implement healthy dietary practices.



Figure:1

Previous research has consistently highlighted the impact of socioeconomic status (SES) on dietary behaviors and nutritional outcomes. Adolescents from higher SES backgrounds typically have better access to diverse and nutritious foods, higher levels of nutritional knowledge, and healthier dietary practices. In contrast, those from lower SES backgrounds often face multiple barriers, including food insecurity, limited access to nutrition education, and cultural practices that may not prioritize healthy eating. These disparities are particularly pronounced in rural areas, where the economic and educational infrastructure is often underdeveloped.

In Rajasthan, the majority of rural families rely on agriculture as their primary source of income, which is often unstable and insufficient to meet the family's nutritional needs. The educational attainment of parents, especially mothers, is another critical determinant of adolescent nutrition. Studies have shown that maternal education is closely linked to better nutritional outcomes for children, as educated mothers are more likely to be aware of the importance of nutrition and to make informed dietary choices. However, in rural Rajasthan, educational opportunities for women have historically been limited, which in turn affects the nutritional practices within families.

The present study aims to explore the impact of socioeconomic factors on nutritional knowledge and dietary practices among school-going adolescents in rural areas of Jodhpur, Rajasthan. By examining the interplay between socioeconomic status and KAP, this research seeks to identify the specific barriers and facilitators to healthy eating among adolescents in this region. The study builds on existing data from a comprehensive survey of adolescents, focusing on variables such as family income, parental education, and access to nutritional resources.

This study is particularly relevant in the context of current public health challenges in India. The country is grappling with

a dual burden of malnutrition, where undernutrition and micronutrient deficiencies coexist with rising rates of obesity and diet-related non-communicable diseases. Adolescents, being in a transitional stage of life, are especially susceptible to the impacts of poor nutrition. Addressing the nutritional needs of this population is critical for breaking the intergenerational cycle of poverty and malnutrition.

The findings of this study are expected to provide valuable insights into the socio-economic determinants of adolescent nutrition in rural Rajasthan. By identifying the specific factors that influence nutritional knowledge and dietary practices, the research aims to contribute to the development of targeted interventions that can improve the nutritional status of adolescents in these communities. Such interventions could include educational programs tailored to the needs of rural populations, efforts to improve the economic conditions of families, and policies that enhance access to nutritious foods.

In conclusion, this study underscores the importance of understanding the socio-economic context in addressing the nutritional challenges faced by adolescents in rural Rajasthan. By focusing on the impact of socioeconomic factors on nutritional knowledge and dietary practices, the research seeks to offer actionable recommendations that can be implemented at the community and policy levels to improve adolescent nutrition in rural areas. Through a comprehensive analysis of the existing data and a focus on the unique challenges of rural Rajasthan, this study aims to contribute to the broader discourse on adolescent nutrition and public health in India.

REVIEW OF LITERATURE

Some of the relevant literature reviews are listed below to gain some insight into nutrition education.

Fieldhouse, P. (1995) This study explores how cultural beliefs and practices influence the dietary habits of adolescents, particularly in rural settings. It highlights the role of gender-specific food allocations and taboos, which can lead to



nutritional imbalances. For example, in some cultures, boys may be given more protein-rich foods, while girls may receive less nutritious food, affecting their overall health and development. The study emphasizes the importance of culturally sensitive nutrition education that respects local traditions while promoting balanced and healthy eating habits. By understanding the cultural context, interventions can be designed to improve the nutritional status of adolescents without alienating the communities they aim to help.¹

Hanson, M. D., & Chen, E. (2007) This research discusses the significant impact of socioeconomic status (SES) on dietary habits among adolescents. It finds that adolescents from lower-income families are more likely to consume unhealthy, energy-dense foods due to their affordability and availability. The study also highlights how lower SES is associated with lower nutritional knowledge and less access to healthy food options. This creates a cycle where poor dietary habits contribute to long-term health issues, such as obesity and malnutrition. The study calls for policies that address these disparities by improving access to affordable healthy foods and enhancing nutrition education for low-income families.²

Neumark-Sztainer, D., Story, M., Resnick, M. D., & Blum, R. W. (1996) This study identifies significant gender differences in dietary practices among adolescents. It finds that girls often consume less protein and fat but more fruits and vegetables compared to boys. The study also highlights that societal expectations and gender roles can influence these dietary patterns, with girls often being more health-conscious due to cultural pressures to maintain a certain body image. However, this focus on appearance can sometimes lead to restrictive eating habits that are not nutritionally balanced. The study suggests that nutrition education programs should address these gender differences and encourage both boys and girls to adopt healthy, balanced diets.³

Lytle, L. A., & Kubik, M. Y. (2003) This research evaluates the effectiveness of school-based nutrition programs in improving the dietary habits of adolescents in rural settings. The study finds that such programs significantly enhance nutritional knowledge and healthier eating practices among students. By integrating nutrition education into the school curriculum and providing balanced meals, these programs help address the nutritional gaps that are common in rural areas. The study emphasizes the importance of sustained and comprehensive programs that involve teachers, parents, and the

community to ensure long-term improvements in adolescent nutrition.⁴

Mulugeta, A., Hagos, F., Stoecker, B. J., Kruseman, G., Linderhof, V., Abraha, Z., ... & Kuhnlein, H. V. (2009) Conducted in rural Africa, this study examines the knowledge, attitudes, and practices related to nutrition among adolescent girls. It finds that while there is an awareness of the importance of nutrition, access to a varied and balanced diet is often limited by economic factors and local agricultural practices. The study highlights the role of education in improving nutritional knowledge and the need for programs that address the specific dietary challenges faced by adolescents in these settings. The findings suggest that improving access to education and nutritional resources can significantly enhance the health outcomes of rural adolescents in Africa.⁵

Pearson et al. (2009) explored the significant role that parents play in shaping the dietary choices of adolescents. The study found that adolescents are more likely to adopt healthy eating habits when their parents have a good understanding of nutrition and actively promote healthy eating at home. The research also highlighted the influence of parenting styles and family structure on adolescent dietary behavior. For instance, adolescents from single-parent households were more likely to have irregular meal patterns and lower fruit and vegetable intake compared to those from two-parent households. The study suggests that nutrition education programs should include components that engage parents, providing them with the knowledge and skills needed to support healthy eating habits at home. This approach could lead to more consistent and long-lasting improvements in adolescent nutrition.⁶

Sharma (2006) conducted a review of school-based interventions aimed at improving dietary habits among adolescents, with a particular focus on programs designed to prevent obesity. The review found that nutrition education programs are most effective when they are interactive, culturally relevant, and include hands-on activities such as cooking classes and school gardens. These programs not only improved students' nutritional knowledge but also led to positive changes in their eating behaviors, including increased consumption of fruits and vegetables and reduced intake of sugary snacks. Sharma emphasized that for these interventions to be successful, they need to be sustained over time and supported by a broader public health framework that includes policy changes, community involvement, and ongoing support from school administrators and teachers. The study concludes

¹ Fieldhouse, P. (1995). *Food and nutrition: Customs and culture*. Springer Science & Business Media.

² Hanson, M. D., & Chen, E. (2007). *Socioeconomic status and health behaviors in adolescence: A review of the literature*. *Journal of Behavioral Medicine*, 30(3), 263-285. <https://doi.org/10.1007/s10865-007-9098-3>

³ Neumark-Sztainer, D., Story, M., Resnick, M. D., & Blum, R. W. (1996). *Correlates of inadequate fruit and vegetable consumption among adolescents*. *Preventive Medicine*, 25(5), 497-505. <https://doi.org/10.1006/pmed.1996.0082>

⁴ Lytle, L. A., & Kubik, M. Y. (2003). *Nutritional issues for adolescents*. *Best Practice & Research Clinical Endocrinology &*

Metabolism, 17(2), 177-189. [https://doi.org/10.1016/S1521-690X\(03\)00003-3](https://doi.org/10.1016/S1521-690X(03)00003-3)

⁵ Mulugeta, A., Hagos, F., Stoecker, B. J., Kruseman, G., Linderhof, V., Abraha, Z., ... & Kuhnlein, H. V. (2009). *Nutritional status of adolescent girls from rural communities of Tigray, Northern Ethiopia*. *Ethiopian Journal of Health Development*, 23(1).

⁶ Pearson, N., Atkin, A. J., Biddle, S. J., Gorely, T., & Edwardson, C. (2009). *Parenting styles, family structure, and adolescent dietary behavior*. *Public Health Nutrition*, 12(9), 1769-1775. <https://doi.org/10.1017/S1368980008004612>



that comprehensive nutrition education is a critical component of efforts to improve adolescent health outcomes.⁷

Tee (1999) explored the dietary practices of adolescents in rural Southeast Asia, focusing on the nutritional challenges faced by this demographic. The study found that traditional diets in these regions are often high in carbohydrates and low in protein, vitamins, and minerals, leading to widespread nutritional deficiencies. Economic constraints and the high cost of nutrient-rich foods were significant barriers to dietary diversity. The study also highlighted the role of cultural practices, such as the preference for large quantities of rice or noodles at meals, which further limited the intake of other food groups. Tee suggested that addressing these challenges requires a combination of nutrition education, economic support for low-income families, and efforts to increase the availability of affordable, nutrient-dense foods in rural areas. The study emphasized the importance of culturally appropriate interventions that respect traditional eating practices while promoting balanced diets.⁸

RESEARCH OBJECTIVES

- To assess the relationship between socioeconomic factors and the nutritional knowledge and dietary practices of school-going adolescents in rural Jodhpur, Rajasthan.
- To identify barriers and facilitators to adopting healthy dietary practices among adolescents, with a focus on addressing socioeconomic disparities.

RESEARCH METHODOLOGY

This study employed a cross-sectional survey design to investigate the impact of socioeconomic factors on nutritional knowledge and dietary practices among school-going adolescents in rural areas of Jodhpur, Rajasthan. The study aimed to assess the relationship between various socioeconomic variables, such as family income, parental education, and access to nutritional resources, with the nutritional knowledge and dietary habits of adolescents.

Study Population and Sampling

The study population comprised school-going adolescents aged 10-18 years in rural areas of Jodhpur, Rajasthan. A sample size of 385 adolescents was determined based on statistical calculations for adequate representation of the target population. Stratified random sampling was used to ensure representation across different age groups and socioeconomic

strata. The participants were selected from various schools in the rural regions of Jodhpur, ensuring a diverse and representative sample.

Data Collection

Data were collected using a structured questionnaire. The questionnaire was designed to capture comprehensive information on the following variables:

Socioeconomic Status (SES): Information on family income, parental education, and occupation was collected to determine the SES of each participant.

Nutritional Knowledge: A series of questions were developed to assess the adolescents' understanding of basic nutritional concepts, healthy dietary practices, and the importance of balanced nutrition.

Dietary Practices: Participants were asked to report their usual dietary intake, including the frequency and quantity of consumption of various food groups, such as fruits, vegetables, protein-rich foods, and energy-dense foods.

The questionnaire was pre-tested in a pilot study with a small group of adolescents to ensure clarity and reliability of the questions. Based on the feedback received from the pilot test, necessary adjustments were made.

Data Analysis

The data collected were entered into a statistical software package for analysis. Descriptive statistics, such as means, frequencies, and percentages, were used to summarize the demographic characteristics of the participants and their responses to the questionnaire.

Ethical Considerations

Informed consent was obtained from the parents or guardians of the adolescents, and consent was obtained from the participants themselves. The participants were assured of the confidentiality and anonymity of their responses, and they were informed of their right to withdraw from the study at any time without any consequences.

RESULT AND DISCUSSION

This section presents the detailed analysis and results of the study, which assessed the nutritional status and dietary habits of school-going adolescents in rural areas of Jodhpur City, Rajasthan.

GENDER DISTRIBUTION

Gender	Frequency	Percentage
Female	193	50.13%
Male	192	49.87%
Total	385	100.00

The gender distribution among the 385 participants is almost evenly split, with 50.13% identifying as female and 49.87% as male. This balanced representation ensures that the study

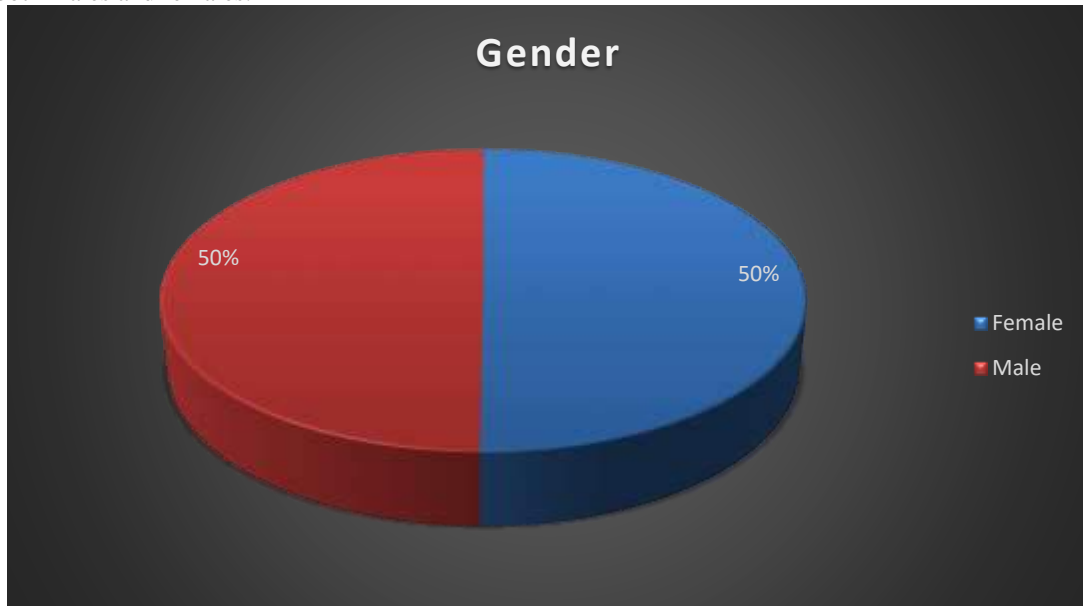
reflects perspectives and behaviors of both genders equally, thereby avoiding gender bias and providing a comprehensive

⁷ Sharma, M. (2006). School-based interventions for childhood and adolescent obesity. *Obesity Reviews*, 7(3), 261-269. <https://doi.org/10.1111/j.1467-789X.2006.00227.x>

⁸ Tee, E. S. (1999). Nutrition of Malaysians: Where are we heading? *Malaysian Journal of Nutrition*, 5(1), 87-109.



understanding of how nutritional factors might affect or be perceived by both males and females.

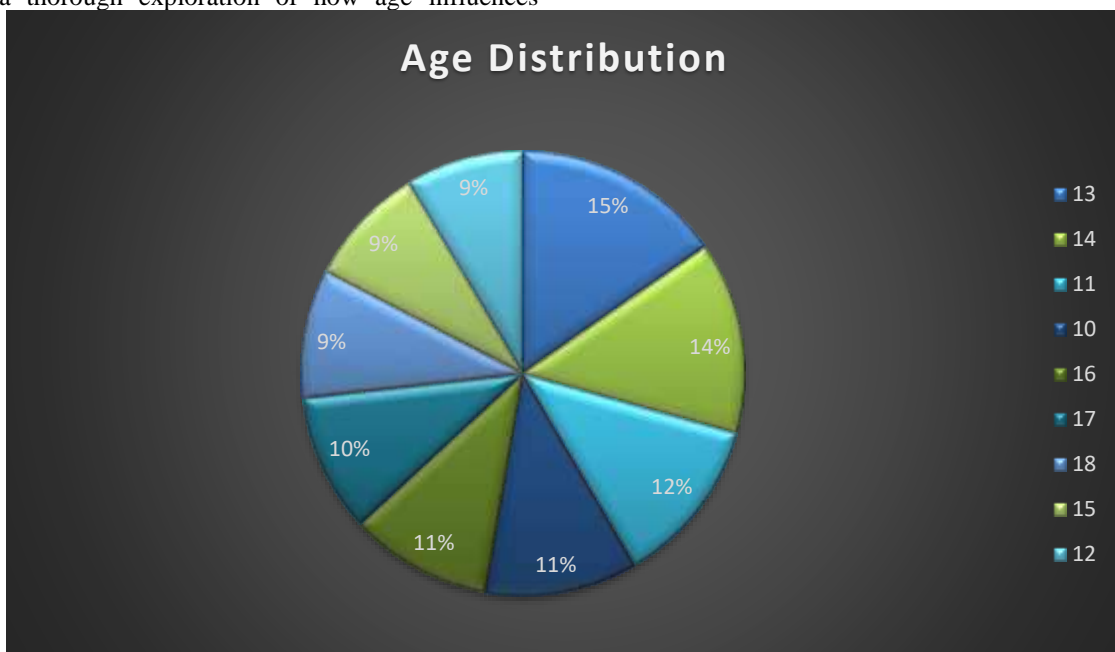


AGE DISTRIBUTION

Age	Frequency	Percentage
13	59	15.32%
14	54	14.03%
11	47	12.21%
10	43	11.17%
16	40	10.39%
17	39	10.13%
18	36	9.35%
15	34	8.83%
12	33	8.57%
Total	385	100%

The participants' ages range from 10 to 18 years, with the majority being 13 years old. This diverse age distribution allows for a thorough exploration of how age influences

nutritional knowledge and dietary practices across different stages of adolescence.





EDUCATIONAL LEVEL DISTRIBUTION

Lower Grades (1-3)	99	25.71%
Middle Grades (4-7)	129	33.51%
Higher Grades (8-11)	157	40.78%
Total	385	100%

Participants are categorized into three educational grade groups, with the highest representation in Higher Grades (8-11), reflecting the study's focus on older adolescents. This

categorization helps in understanding how educational attainment may correlate with nutritional knowledge and practices.

HEIGHT DISTRIBUTION

Height Range (m)	Frequency	Percentage
1.20 - 1.30	50	12.99%
1.31 - 1.40	74	19.22%
1.41 - 1.50	95	24.68%
1.51 - 1.60	89	23.12%
1.61 - 1.70	61	15.84%
Total	385	100%

The physical development of participants, as indicated by height and weight distributions, provides insights into their growth patterns. These measurements are critical for

understanding how physical characteristics correlate with nutritional status.

WEIGHT DISTRIBUTION

Weight Range (kg)	Frequency	Percentage
30 - 39.99	95	24.68%
40 - 49.99	115	29.87%
50 - 59.99	105	27.27%
Total	385	100%

The weight distribution among participants spans from 30 to 69.99 kilograms, with the largest group being those in the 40 - 49.99 kg range, representing 29.87% of the participants. This

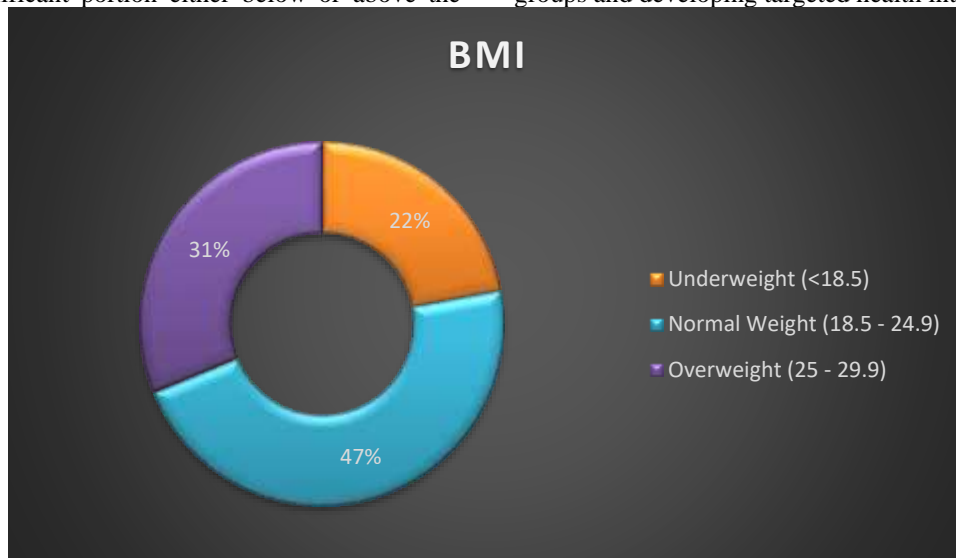
weight distribution is indicative of the overall nutritional status and physical health of the participants.

BODY MASS INDEX (BMI)

BMI Category	Frequency	Percentage
Underweight (<18.5)	85	22.08%
Normal Weight (18.5 - 24.9)	180	46.75%
Overweight (25 - 29.9)	120	31.17%
Total	385	100%

The BMI distribution highlights varying levels of nutritional health, with a significant portion either below or above the

normal weight range. This data is crucial for identifying at-risk groups and developing targeted health interventions.





FINDINGS OF THE STUDY

The study provides a comprehensive analysis of the relationship between socioeconomic factors and nutritional knowledge and dietary practices among school-going adolescents in rural Jodhpur, Rajasthan. The key findings from this research are as follows:

Socioeconomic Influence on Nutritional Knowledge:

Adolescents from higher socioeconomic backgrounds demonstrated significantly better nutritional knowledge compared to their counterparts from lower socioeconomic backgrounds. This disparity suggests that family income and parental education play a critical role in shaping adolescents' understanding of nutrition. Higher-income families tend to have better access to nutritional information and resources, which translates into more informed dietary choices among adolescents.

Dietary Practices and Socioeconomic Status:

There was a noticeable difference in dietary practices across different socioeconomic strata. Adolescents from lower socioeconomic backgrounds were more likely to have poorer dietary practices, such as higher consumption of unhealthy, energy-dense foods, and lower intake of fruits, vegetables, and protein-rich foods. This trend can be attributed to limited access to affordable nutritious foods and a lack of nutritional education within these families.

Nutritional Status Indicators:

The study also revealed varying levels of nutritional health among the participants, as indicated by their Body Mass Index (BMI). A significant portion of the adolescents were either underweight or overweight, with a smaller percentage falling within the normal weight range. These findings highlight the dual burden of malnutrition in the region, where undernutrition and overnutrition coexist, particularly among adolescents from socioeconomically disadvantaged backgrounds.

Barriers to Healthy Eating:

The research identified several barriers to healthy eating among the adolescents, including food insecurity, cultural practices, and a lack of nutritional knowledge. These barriers were more pronounced in lower socioeconomic groups, where economic constraints and traditional dietary practices often limit the diversity and quality of the diet.

Gender Differences:

The study found minimal gender differences in nutritional knowledge and dietary practices, suggesting that both male and female adolescents in this rural setting are equally impacted by socioeconomic factors. However, the gender distribution in the study was almost evenly split, ensuring that the findings are representative of both genders.

Recommendations

Based on the findings of the study, the following recommendations are proposed to achieve the objectives and improve nutritional knowledge and dietary practices among adolescents in rural Jodhpur:

Enhanced Nutritional Education Programs:

Implement targeted nutritional education programs in schools, focusing on adolescents from lower socioeconomic backgrounds. These programs should be designed to improve awareness and understanding of healthy dietary practices and should include interactive components, such as cooking classes and school gardens, to make learning more practical and engaging.

Improving Access to Nutritious Foods:

Develop community-based initiatives to improve access to affordable nutritious foods in rural areas. This could include subsidizing healthy food options, establishing community gardens, and providing resources for families to grow their own food. Additionally, public health policies should focus on reducing the cost of nutrient-dense foods, making them more accessible to low-income families.

Addressing Cultural Barriers:

Culturally sensitive interventions are needed to address traditional dietary practices that may contribute to nutritional imbalances. These interventions should respect local customs while promoting balanced diets that include a variety of food groups. Engaging community leaders and elders in these initiatives could help in gaining community acceptance and ensuring the success of the programs.

Support for Nutritionally At-Risk Groups:

Special attention should be given to adolescents who are either underweight or overweight, with tailored interventions to address their specific nutritional needs. These could include individualized counseling, supplemental nutrition programs, and regular monitoring of their nutritional status to ensure that they achieve and maintain a healthy weight.

Parental Involvement:

Engage parents in nutrition education programs to enhance their ability to support healthy eating habits at home. Since parental education, particularly maternal education, has been linked to better nutritional outcomes, efforts should be made to educate parents about the importance of nutrition and how they can foster healthy eating habits in their children.

Incorporating Socioeconomic Considerations in Public Health Policy:

Public health policies should explicitly address the socioeconomic disparities that impact adolescent nutrition. This could include providing financial assistance to low-income families, improving educational opportunities, particularly for women, and ensuring that all adolescents have access to the resources they need to make healthy dietary choices.

These recommendations are designed to address the specific challenges identified in the study and to promote better nutritional outcomes for adolescents in rural Jodhpur. By focusing on both educational and structural interventions, it is possible to create an environment that supports healthy dietary practices and reduces the socioeconomic disparities that currently hinder adolescent nutrition in the region.



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INVESTMENT SAVING PATTERN AND BEHAVIOUR OF IT SECTOR EMPLOYEES TOWARDS INVESTMENT AVENUES

Ms. Teresa Stephen¹, Ms. Christa Mary Jose²

¹Assistant Professor, Department of Commerce, St. Paul's College, Kalamassery

²M.Com Student 2022-24 Batch, St. Paul's College, Kalamassery

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ABSTRACT

In every country, savings play a vital role in the economy. Savings are used as a catalyst for growth across the nation when they are invested in services and products that the public can use. The IT sector is a significant contributor to India's economy, and the professionals working in this sector play a crucial role in driving technological innovation and economic growth. However, there is a gap in understanding the investment saving patterns and behaviours of IT sector professionals. Despite their relatively high earning potential, there is limited research on how IT professionals manage their finances, make investment decisions, and plan for long-term financial security. This study aims to address this gap by examining the investment saving patterns and behaviours of IT sector professionals. The study was limited to measure the financial awareness, preference, saving pattern and factors affecting decision making. For the purpose of the study 212 respondents of IT sector employees are randomly selected from Ernakulum district.

KEY WORDS: Investment Avenue and IT Sector

1. INTRODUCTION

The most vibrant sector of the Indian financial system in recent years has been the investment corporations. The massive expansion of the Indian capital market can be attributed to economic reforms within the country and economic opening up. This study examines how savings, investment awareness and pattern affect investors' attitudes regarding investments in particular. In addition, it emphasizes the advantages that investors receive from their savings. Age, education, income, expenses, savings, and investments are the factors in the study that are related to structural position. The employees' ages are classified using the age analysis to show the current demographic structure. Older workers are presumed to possess a sophisticated understanding of the many evolving facets of society. Employee values toward society and employment prospects are impacted by education. A person's occupation indicates their transition from primary to new and customary roles. The constantly shifting picture of income, expenses, and savings is reflected. Shifts in the employees' living standards and overall quality of life. In every country, savings play a vital role in the economy. Savings are used as a catalyst for growth across the nation when they are invested in services and products that the public can use. Investment opportunities are abundant in the Indian financial scene as well. It contains sensible possibilities for the average man to invest his savings, however it's undoubtedly not the greatest or deepest market in the world.

2. STATEMENT OF THE PROBLEM

This study is to identify the saving pattern and behaviour of IT sector employees. The study on the investment saving pattern and behaviour of IT sector employees towards investment avenues holds significant potential for informing various stakeholders about the financial dynamics of this important workforce segment and for guiding strategies aimed at optimizing financial well-being for both individuals and the broader economy. The investment saving habits and behaviour of IT workers are very crucial for several reasons. The choices they make have a bearing on the personal economic stability but also determine the direction of economic growth and market motion. By studying this group's behaviour, policy makers obtain insights into effective techniques for boosting savings and investments, which ultimately enhance individual financial well-being as well as broader national development.

3. OBJECTIVES OF THE STUDY

- To study the investor awareness of IT Sector employees towards the investment avenues in the study domain.
- To measure the investment preference of IT sector employees towards the investment avenue
- To understand the relationship and saving pattern of IT sector employees
- To analyze the investment decision of IT sector employees



4. HYPOTHESES OF THE STUDY

H1: There is significant effect between investment awareness and decision making

H2: There is significant effect between investment preference and decision making

H3: There is significant effect between saving pattern and decision making

5. RESEARCH METHODOLOGY

Data has been collected through both primary and secondary. However, the study is based mainly on primary data. Primary data is collected through structured questionnaire. Secondary data is collected through journals, books, and website. Population of the sample is employees working in IT sector in Ernakulum district. For the purpose of the study 212 respondents of IT sector employees are randomly selected from Ernakulum district. Convenience sampling was used to collect data. Data analysis has been done by appropriate mathematical and statistical tools like Mean, standard deviation, T test, ANOVA, correlation and regression analysis.

6. MAJOR FINDINGS OF THE STUDY

- There is a high mean score 3.94 for investment awareness state that respondents have diverse investment objective like long term goal, Income, capital appreciation
- The study helps to reveals that investors have high preference on previously invested instruments mean score is 3.86
- The study helps to reveal that IT sector employees generally perceive saving as crucial for ensuring a secure future for themselves and their families mean score 4.08
- The study reveals that when the market goes down it sector employee tends to sell the risker investment and invest the money in safety instruments mean score is 3.91
- The study reveals that there is a significant relationship between investment awareness and decision making
- The study reveals that there is a significant relationship between investment preference and decision making
- The study reveals that there is a significant relationship between saving pattern and decision making
- The study reveals that there is significant difference based on age regarding investment awareness, preference, saving pattern and decision making
- The study reveals exists a positive relationship between investment awareness and decision making the data also showed that the relationship is significant

7. CONCLUSION

To sum up, this study offers a thorough grasp of the financial priorities and decision-making processes of IT sector employees by examining their investment saving habits and behaviour. This group exhibits a strong preference for safe and diverse investment options and is distinguished by comparatively higher income levels and digital savvy. The best options include mutual funds, term deposits, and provident funds, which show a balanced

attitude to risk and return. The information shows that these employees' investing decisions are heavily influenced by age, income, and financial literacy, with younger employees adopting more aggressive investment strategies and older employees choosing more conservative options. The dependence on digital channels for investment management is a noteworthy discovery. These technologies' real-time information, ease of use, and accessibility fit in nicely with both business and lifestyle. Furthermore, financial advising services are important, particularly for people with higher incomes, suggesting that people are increasingly turning to professionals for advice on making better investment decisions. The study also emphasizes how financial awareness and education affect investing behaviour. Higher financial literacy among employees increases the likelihood that they will invest in a greater variety of financial goods and diversify their portfolios. This emphasizes the necessity of focused financial education initiatives to improve IT industry workers' understanding of and confidence in investing. Overall, the results point to proactive, knowledgeable investors in the IT sector that put convenience, development potential, and safety first when making decisions about their investments. These insights can be used by financial institutions and policymakers to provide customized financial services and solutions that address the unique requirements of this group. Stakeholders can create a more inclusive and effective investing environment by taking into account their preferences and improving financial literacy, which would ultimately benefit IT sector employees' stability and financial well-being.

8. SUGGESTIONS

- Read Articles and Books: Begin with Investment-Friendly Books. Seek reliable sources and writers who can make difficult ideas understandable.
- Keep Up with Financial News: To be informed about market movements and economic indicators, keep up with credible financial blogs, publications, and websites.
- Establish Your Money Objectives:
Short-Term Goals: Decide what you want to accomplish in the next few years, such accumulating money for a trip or purchasing a vehicle.
Long-Term Objectives: Make plans for significant life events like as purchasing a home, retiring, or paying for a child's school.
- Recognize Various investment Types:
Stocks: Due to market volatility, stocks have a greater risk profile despite their potential for large profits.
Bonds: Usually less risky than stocks, they pay interest on a regular basis and provide income.
Mutual funds and exchange-traded funds (ETFs): Offer diversification through holding a range of stocks, bonds, and other assets.
Real estate: Has the potential to increase in value and provide rental income, but it also needs constant maintenance and may provide liquidity issues.
Commodities, cryptocurrencies, and private equity are



examples of alternative investments that provide varying risk-return profiles.

- Consider Investment Time Horizon:
Short-Term: To save money, investments needed within a few years may choose less volatile assets.
Long-Term: Given that market swings can eventually level out, it is possible to afford to take on greater risk in exchange for possibly larger profits.
- Utilize Different Savings Accounts: Keep separate savings accounts for things like vacation, schooling, or a down payment on a house. Transfer money automatically to each account according to your schedules and savings objectives.
- Reduce Costs: Examine your spending on a regular basis to find areas where you may save money, such reducing the number of pointless subscriptions you have or eating out less often. To free up additional cash for savings, think about haggling over prices or transferring to less expensive options.
- Education on risk management: Educate people on risk management by holding seminars or webinars on how to handle high-risk investments and how to reduce possible losses.
- Holistic financial education: Establish a curriculum for holistic financial education that addresses a variety of subjects, such as risk management, diversification, and financial goal-setting, and autonomous decision-making.
- Frequent Assessment of Financial Health-Ups: Encourage staff members to consult financial consultants on a regular basis to assess and modify their investment portfolios.
- Provide rewards for learning: Provide rewards for taking part in financial literacy initiatives, such as prizes, honours, or extra financial advantages.
- Education and Training: Strengthen financial literacy initiatives to support investors in making well-informed choices grounded in their expertise.
- Feedback and Improvement: Constantly get input from staff members regarding their need for financial education, then modify the programs to better meet their needs.
- Create consistent Investment Products: Financial institutions can create and market investment products that provide low volatility and consistent returns, like bonds, fixed deposits, and conservative mutual funds, in light of the preference for stable investments.
- Investor Counselling Services: Make counselling services available to investors so they can control their emotions and come to logical conclusions, particularly in times of market decline. By doing this, the propensity to abruptly switch from riskier to safer investments may be lessened.
- Behavioural Finance Education: To assist investors in understanding frequent biases and emotional reactions that may affect their investment decisions, include behavioural finance concepts into educational programs.
- Clear Information about Risks and Returns: Make sure that all investment products include information about possible risks and anticipated returns that is easy to understand. This

can assist investors in setting reasonable expectations and making well-informed decisions.

- Encourage Long-Term Investment plans: Inform investors about the possible risks associated with trading often based on erratic market swings as well as the advantages of long-term investment plans.

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DESIGN AND IMPLEMENTATION OF IoT BASED SMART MIRROR

Aryman Kaushik¹, Prasanna Singh², Sarabjeet Kaur²

¹Computer Science and Engineering (IoT), Netaji Subhas University of Technology, Delhi, India

²Electronics and Communication Engineering, Noida Institute of Engineering and Technology, AKTU, India

ABSTRACT

Magic Mirror is the implementation of a multi-media interactive mirror system. By fusing processing of images and audio, Internet connectivity, 3D or multimedia, or standard peripherals and reflective glass, The Magic Mirror is available deployed in currently marketed personal computers & handheld devices. Modern technology has made life easier and more time-efficient for people. This essay describes the creation of a smart mirror, which will simplify and speed up daily tasks. A straightforward mirror that has been improved with technology is called the Smart Mirror. The objective of the smart mirror is to make it simple to access information services like news feeds, the weather, the time, and other items. Additionally, it offers some fundamental AI capabilities, such as real-time user engagement. The Raspberry Pi 3 computer and the architecture that retrieves data from the internet over Wi-Fi are known as the Smart Mirror CPU. Smart Mirror can recognize the user with a speech and facial recognition model. In today's culture, we have access to information via our phones, laptops, desktops, and other devices. The aspect that worries the average person is that it can be used to make daily life simpler and faster.

KEYWORDS - Peripherals, a framework, Internet access, multimedia, Raspberry Pi 3, Internet of Things, and reflective glasses

1. INTRODUCTION

The Internet of Things has made it possible for a new technology that can connect objects intelligently; intelligent communication between objects can now be carried out without the need for human contact. People can now complete their work more quickly and effectively thanks to technology. Smart Mirror, one of its uses, may show the time, date, weather, and traffic conditions on the mirror. The mirror has the properties of having a clear back side and a reflective front side that functions as a mirror, allowing whatever shown on the monitor to be seen on the mirror surface.

To guarantee that all of the information is seen, the mirror must be set directly on the surface. RaspberryPi, which maintains the Raspbian Jessie PIXEL running system (OS), the LCD is shielded by an acrylic layer. monitoran internet browser, and Java Script like Python for the UX/UI display can all be used to achieve all of these capabilities. The use of Smart Mirror has several benefits and simplifies life, for example, by eliminating the need to check a mobile device for alerts, weather updates, etc. The proposed concept is to create an interactive, futuristic Smart Mirror using the internet of things for ambient home automation, business applications, and public environments. This project will present real-world data and display it to the user based on his or her requirements on the mirror, which is what distinguishes it as a Smart Mirror. The Smart Mirror's features display the weather right now, the most recent news, as well as the dates and times we may use voice commands to communicate with the Smart Mirror.

A tiny single board, the Raspberry Pi, is computer (SBC) called the Raspberry Pi, developed by the UK's in the Raspberry Pi Foundation partnership using Broadcom The Raspberry Pi

project's first focus was to advance fundamental computer science research on the classroom as well as in undeveloped nations. the initial design was used far more than planned and sold beyond the intended industry for applications like robotics. Given its modest price, high versatility, and start design, It's utilised in many fields, included meteorological observation. Compatible with HDMI and USB standards, it is widely used by computer and electronics enthusiasts For the line of compact single-board computers known as the Raspberry Pi, the A Unix-like operating system based on the Debian Linux distribution is Raspberry Pi OS (formerly Raspbian). Raspbian is utilised by the Raspberry Pi. Jessie PIXEL running system (OS), the LCD is shielded by an acrylic layer. Monitor a web browser, and Python or JavaScript for the UX/UI display. It was initially produced independently in 2012, and the Raspberry Pi Foundation has been disseminating it as the primary operating system for these boards since 2013. Using the smart mirror has several benefits and makes life easier by not having to constantly check your phone for alerts, weather updates, and more.

2. MOTIVATION

We spend a lot of time using electronic devices and are totally reliant on them for any information we need as we move toward a technologically driven, automated future. We therefore considered automating one of the fundamental tasks that are a part of a daily routine, namely "MIRROR," to assist us with the fundamental everyday mandatory information as a matter of concern to limit screen time among persons. This device's primary goal is to enable technology-enhanced multitasking in daily life and to give critical features on an aesthetically pleasing mirror.



We will be able to visually experience the information we are looking for right on the screen of the mirror if it is designed as a smart mirror using IOT. As we frequently check our phones for notifications, doing so would allow us to save time. Additionally, since the news is displayed on a mirror, two activities are completed concurrently (getting ready for the day and getting the information like news headlines, traffic updates, climatic condition). Utilizing this SMART MIRROR in our daily lives will improve our way of living and aid in multitasking. In addition, we can personalise this mirror to meet our demands, which would simplify some requirements as well. Our primary goal in developing this intriguing and practical tool was to make it affordable for as many people as possible.

3. REQUIREMENTS FOR HARDWARE AND SOFTWARE

A) **Hardware Parts-Raspberry Pi** It is the Raspberry Pi. Main equipment that enables Smart Mirror's ability to display personalized data to each user on the screen. It is a compact individual board computer that uses an internal operating system to run programs. This component comes pre-installed with Raspbian OS (operating system), a Debian-based operating system. You can use any programming language to write the code. This essay is based on Java Script. Once the written code is transferred to the device, the monitor will be able to show the time, date, email notifications, calendars, news feeds, and music as well as weather predictions. It uses web-based services that show the weather, news, and other data retrieving data from a net and presenting it for user as tokens on a monitor. To achieve To connect to the internet, the Raspberry Pi module features a Wi-Fi module. A microphone connected via a USB card is used for voice recognition, allowing users to set reminders or participate in conversations by speaking into the mirror. Raspberry Pi, Figure 1.

B) An LED monitor serves as a conduit for the Raspberry Pi and the mirror, enabling the display of information particular to each user to an HDMI cord. LED stands for Light Emitting Diode. Information such as weather forecasts, dates, times, calendars, user tributes, news feeds, and email notifications can be found here. User voice commands are used to control how these details are displayed. The user can see this display thanks to a mirror that may be used in both directions and is both reflecting and reflective. Therefore, In front of the monitor, place a two-way mirror. Information can be checked while wearing makeup.

C) LED monitor connects the Raspberry Pi to the mirror and serves as an interface, displaying customized information on the screen via HDMI cable. LED stands for Light Emitting Diode. Here you will find information such as weather forecasts, dates, times, calendars, user posts, news feeds, email his alerts. User language commands are used to control how these details are displayed. The user can see this display thanks to a dual-sided mirror that both reflecting and refractive property. Therefore, by utilising a dual-sided a reflection in the monitor, you could check knowledge while applying makeup. An everyday mirror includes a reflection feature that allows only the user to see the reflection while reflecting all the light that enters the glass. A dual-sided mirror has refractive and reflective surfaces. properties, only The light is refracted and partially reflected. to pass allowing the user to see through the glass surface observe the monitor's information display.

D) Items software like, a pre-installed operating system based on Debian is called Raspbian OS. on the RaspberryPi components, made it easy for customers to program java script. This study uses JAVA Script as the programming language to display information. A prototype-based, object-oriented high-level programming language is called Java Script or JS.



Hardware Components

4. OBSERVATION

By omitting all of its internal technology, the Smart Mirror still functions as a mirror, making it incredibly easy to use and blending in with our daily life. IoT and home automation are two areas where the Smart Mirror has application. The Smart Mirror can be connected to other devices, such as mobile phones and home appliances, to increase its capabilities.

5. FEASIBILITY STUDY

By using a magic mirror with a high concentration of aluminium, you can use the smart mirror as a mirror to see

yourself like a normal mirror while changing and grooming. Time, date, weather information and news are retrieved from the Internet by Smart Mirror as information system through the specified URL. Websites such as CCN, BBC are used to collect news. Temperature and humidity data are determined using the DHT22 digital sensor. Jumpers are used to connect the DHT22 to his GPIO pins on the Raspberry Pi board. When no one is home, you can turn your smart mirror into a security system by using a VNC viewer to detect people's presence. When someone when it enters the space, the PIR sensor recognises movement of people passing by.

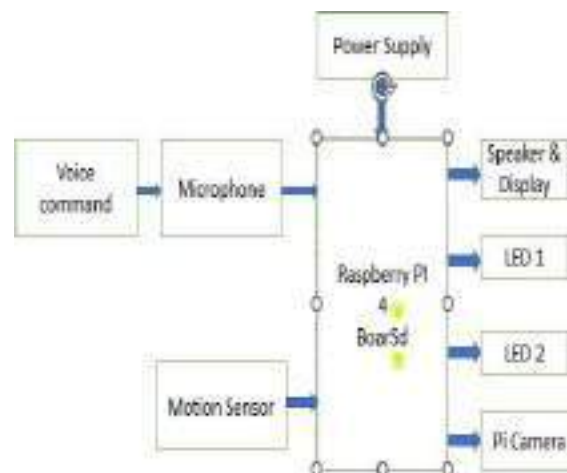
6. IMPLEMENTATION

Language inputs are used throughout modules by way of switch case statements. Each piece of information shown in The mirror has two sections: different modes that are triggered according to the user's voice input. A called is provided to each module, and where its name is pronounced, the appropriate module will be activated, executing the appropriate code and displaying the appropriate information.

Date and Time: Today's lesson is active plus a code for that section is retrieved when all customers provides speaking to a display the time or date. Depending on the region you choose, Google accesses predefined time and date formats in your code (That mirror shows dates or times based on Indian Time of Standard.

News Feed: This module activates the module's code to retrieve news updates whenever a user provides voice command to view news reports. New York Times headlines appear in this category. This data comes from Google and the Google address is provided in the code as a link. Read the latest news from the Times of New York here. whenever this module is enabled, URL would be referenced to retrieve information and updates will be fixed as soon as possible.

8. BLOCK DIAGRAM



9. CONCLUSION

By omitting all of its internal technology, the Smart Mirror still functions as a mirror, making it incredibly easy to use and blending in with our daily life. IoT and home automation are two areas where the Smart Mirror has application. The Smart Mirror can be connected to other devices, such as mobile phones and home appliances, to increase its capabilities.

10. FURTHER WORK

Each product can always use some enhancement. To keep up with the latest technology, everything must be promptly updated or upgraded. Provide a natural form of interaction so that basic voice commands can be used to operate domestic equipment like fans and lights. Since this mirror is mainly used in university environments, it can integrate simple functions such as barcode scanners and fingerprint sensors. This may

Weather Prediction: Whenever a user provides speaking to a display the weather predictions, this section is triggered or gets the code. This section shows all seasons forecasts. That data comes through google and the google address is provided in the code as a link.

7. SUMMARY OF WORK

Information must be visible on screen of Smart Mirror. Something must be able to operate the Smart Mirror without requiring direct interaction. To receive incoming data, Smart mirror must be able to access the internet. The Smart Mirror should module-based and include preset module samples. By default, the Smart Mirror system is in a low-power sleep mode. Multiple screen sizes must be supported by the Smart Mirror. Raspberry Pi Board, Face Detection Module, Voice Module, HDMI, Two-Way Mirror, LCD Monitor, Microphone and Speaker Kit, LED Lights, Stackable Breadboard, HDMI Connecting Wires, Binding Tape, and Wooden Box Holder are the Hardware Requirements for that. Software prerequisites OS Raspbian a smart and interactive mirror that provides real-time data and information updates is obtained, allowing us to receive all the necessary information and customise it to meet our needs. This mirror also includes a voice module for verbal interaction, a face detection security feature, and a motion detection feature to identify passersby.

include enrolling in programs by scanning your ID card.

11. ACKNOWLEDGMENT

The birth of a child is impossible without a mother, and the appropriate road to knowledge is impossible without a teacher. Without the help of those who believed in us and supported us, this project would not have been feasible. It is by far the most important accomplishment of our lives. We would like to express our sincere gratitude to our respected and distinguished project advisor, Ms. Nidhi Sharma (Assistant Professor (ECE), NIET, Department of Electronics and Communication Engineering, Greater Noida) for her valuable support and time. think. I would like to thank Pavan Kumar Shukla (Professor), her project coordinator Dr. Dhananjay Singh and my teachers for their support, support and encouragement throughout this process.



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SELF-ASSESSMENT OF ENGINEERING GRADUATES: A STEP TOWARDS CAREER GOAL

Dr. A.P. Muthulakshmi¹, Mr. Varun K.²

¹Professor, CMS Academy of Management & Technology, Coimbatore – 641049.

² Ph.D Research Scholar, CMS Institute of Management Studies, Coimbatore -641049.

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ABSTRACT

Self-assessment, the process of evaluating individual strength, weakness and nature of personal capacities among the youth, especially graduating student is very important and it plays a greater role in both their career aspirations fulfilment and in leading a comfortable life in future. Engineering is considered to most prestigious and high rewarding job across the globe many of engineering's passing-out with good academic track records exhibit in competent in both hard and soft skills. Finding imbalance between these two elements act as an hinderance for them in acquiring more promising job by the engineering graduates. Bridging the gap between employability and unemployment is possible through self-assessment through strengthening individual job skills. It is the need of the hour to understand the need for self-assessing individual's employable skills to make one self-more suitable to the current job market requirement i.e., by building correlation between individual skills and the nature live hood they would expect to have.

KEY WORDS: Self-Assessment, Employability, Job Skills

INTRODUCTION

Self-assessment, the process of evaluating individual strength, weakness and nature of personal capacities among the youth, especially graduating student is very important and it plays a greater role in both their career aspirations fulfilment and in leading a comfortable life in future. Self-directed and motivated self with development of skills like critical thinking, developing a positive cum unbiased approach towards their learning and work environment, developing personal skill, knowledge and aptitude, being honest, humble cum techno-sound and an attitude to accept feedbacks as comment and suggestion for future growth are some of the important dimensions of self-assessment process. Self-assessment develops a personality and habit of being resilience, confident, independent and more productive. It also supports individuals to promote those skill and knowledge they haven't acquired and focus more towards their goal achievement. Self-assessment develops an intrinsic motivation attitude that is very much need in the 21st century work life (Muonlinetteam, 2023).

Need for Self-Assessment among Engineering Students

Tamil Nadu is an important human resource generating state in India. Nearly 17 per cent of engineering graduates pass-out from Tamil Nadu every year and this percentage is the highest in the country (TOI, 2024). Engineering is considered to most prestigious and high rewarding job across the globe many of engineering's passing-out with good academic track records exhibit in competent in both hard and soft skills. Finding

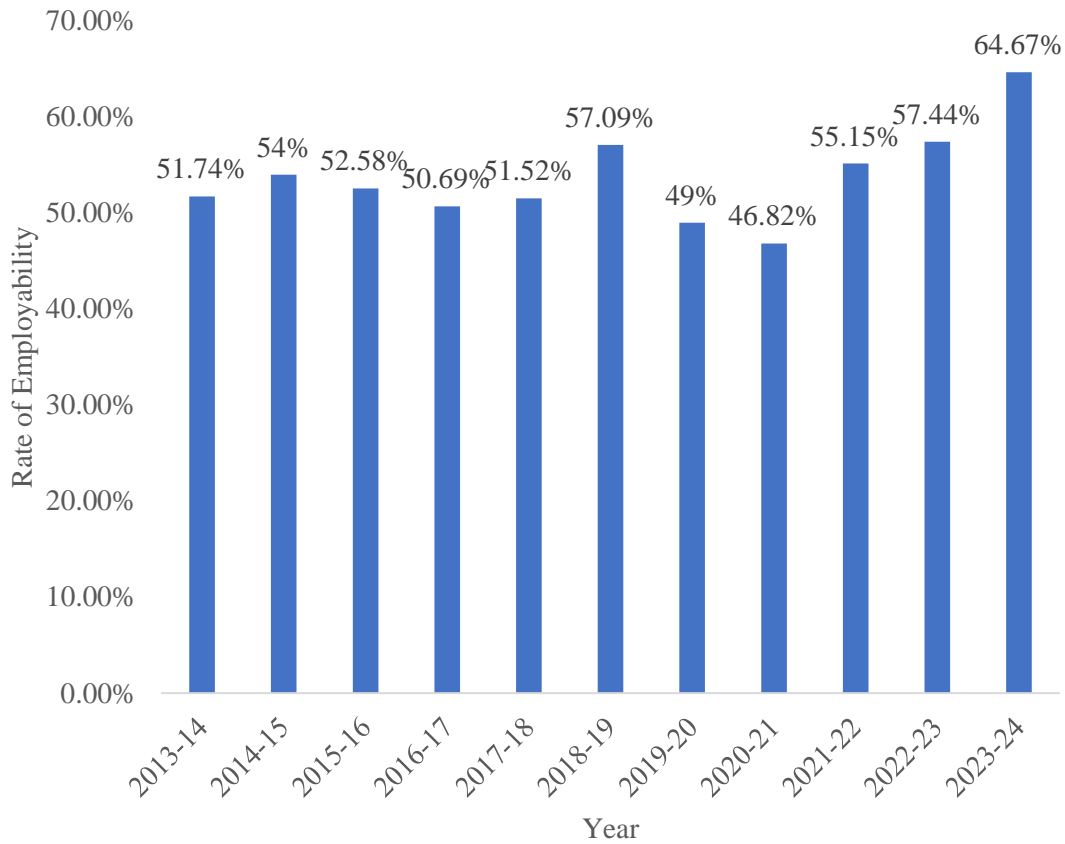
imbalance between these two elements act as an hinderance for them in acquiring more promising job (Srividhya and Vijayakumari, 2021). Only a handful of engineers are employed in a well-remunerating job and few turn-out as entrepreneurs/self-employed. Though this state produces higher number of engineers every year, it also has large number of unemployed engineers. Yes, it is a fact that sizeable number of youths every year pass-out with engineering degree in India, especially in Tamil Nadu. Only handful of these graduates succeed in acquiring valuable job that suits to their individual capacity, as per their aspirations and that support them in achieving their career goal and growth. On the other hand, majority of the engineering graduates are found to suffer from issues of miss-making personal skill and industry's expectations. Thus, most of them are found to be less competent and jobless (Vedhathiri, 2020).

Employability Rate of graduates in India

About 1.6 million fresh engineering graduates passed out in the year 2023, of which just 10 per cent found suitable job and less of 90 per cent struggled to land into good /better job, due to slowdown in the global economic and economic crisis caused due to Covid outbreak. IT (Information Technology) based companies have slashed intake of fresh graduates to an extent of 35-40 per cent, rather they prefer to recruit employees with minimum of 7 to 12 years of work experiences (Business Standard, 2023).



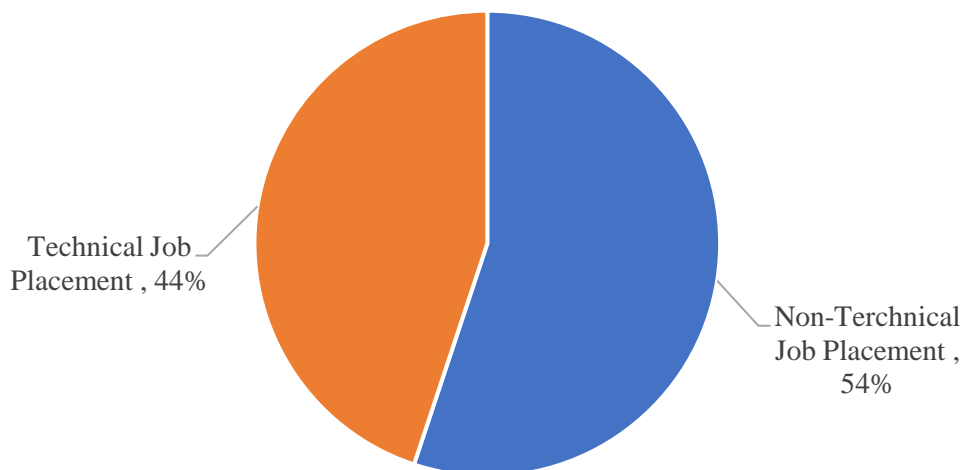
EXHIBIT: 1
EMPLOYABILITY RATIO OF ENGINEERING GRADUATES IN INDIA



The overall employability of the youth in the country in the year 2024 is 52.25 per cent. The employability of the engineering

graduates has raised from 57 per cent in 2023 to 64 per cent in 2024 (Rathore, 2024).

EXHIBIT: 2
EMPLOYABILITY RATIO OF GRADUATES IN INDIA



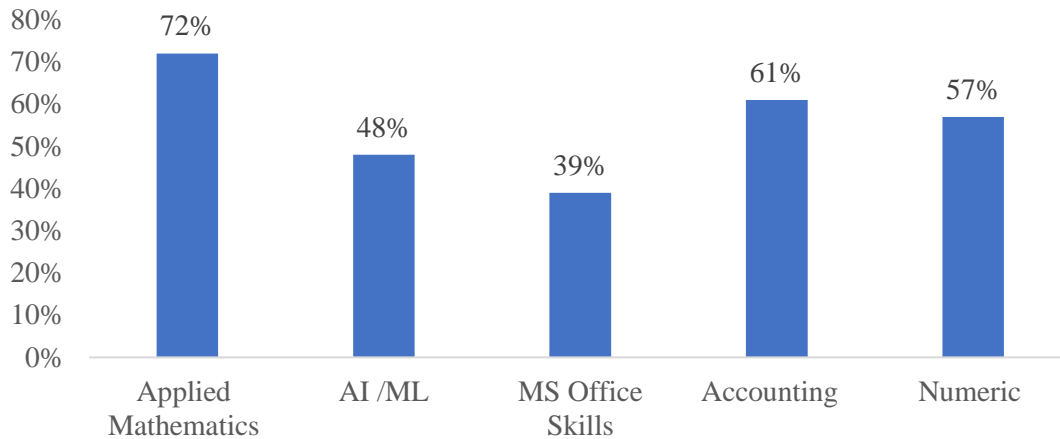
Source: Sreeradha Basu (2023), Just 45% of India's Graduate Jobseekers Meet Industry Needs: Study, The Economic Times, 1st August.



As per the report published by “The Economic Times” based on the employability of graduated youth in the country conducted based on survey among 2500 HE (higher education) campus and 44,000 graduates (about to graduate learners). It was found

that 53 per cent of the graduates are able to place in non-technical jobs, whereas only 44 per cent of the graduates are able to get job in the technical sector (Basu, 2023).

EXHIBIT: 3
EMPLOYABILITY RATIO OF GRADUATES IN INDIA



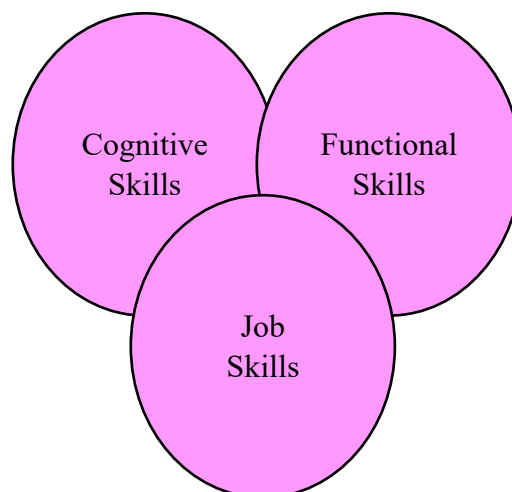
Source: Sreeradha Basu (2023), Just 45% of India’s Graduate Jobseekers Meet Industry Needs: Study, The Economic Times, 1st August.

Employability in the applied mathematics is 72 per cent, in areas of AI/ML (Artificial Intelligent /Machine Learning) is 48 per cent, MS office job skills (39 per cent), employability with accounting and numeric skill 60-61 per cent and 57 per cent, respectively. Wider skill gaps and the employability rates are creating greater pressure on the HEIs (higher education institutions) to focus on these find solution to this alarming issue.

Focus of Modern-Day HEIs

As the employers’ expectation goes, they like to recruits a person with multiple skill sets, that is good in communication, subject proficiency, critical thinking, analytical thing, emotional intelligence, working in team, soft skills and other skills. Thus, beside building job and skill related relationship with industries and experts, the HEIs aims to strengthen cognitive skills (needed for critical thinking), functional skills (enhancing computer, communication etc..) and job-related skills (engineering, electronic, accounting and financial skills) (Basu, 2023) among their graduates.

EXHIBIT: 3
SKILLS TO BE ENHANCED AMONG GRADUATES

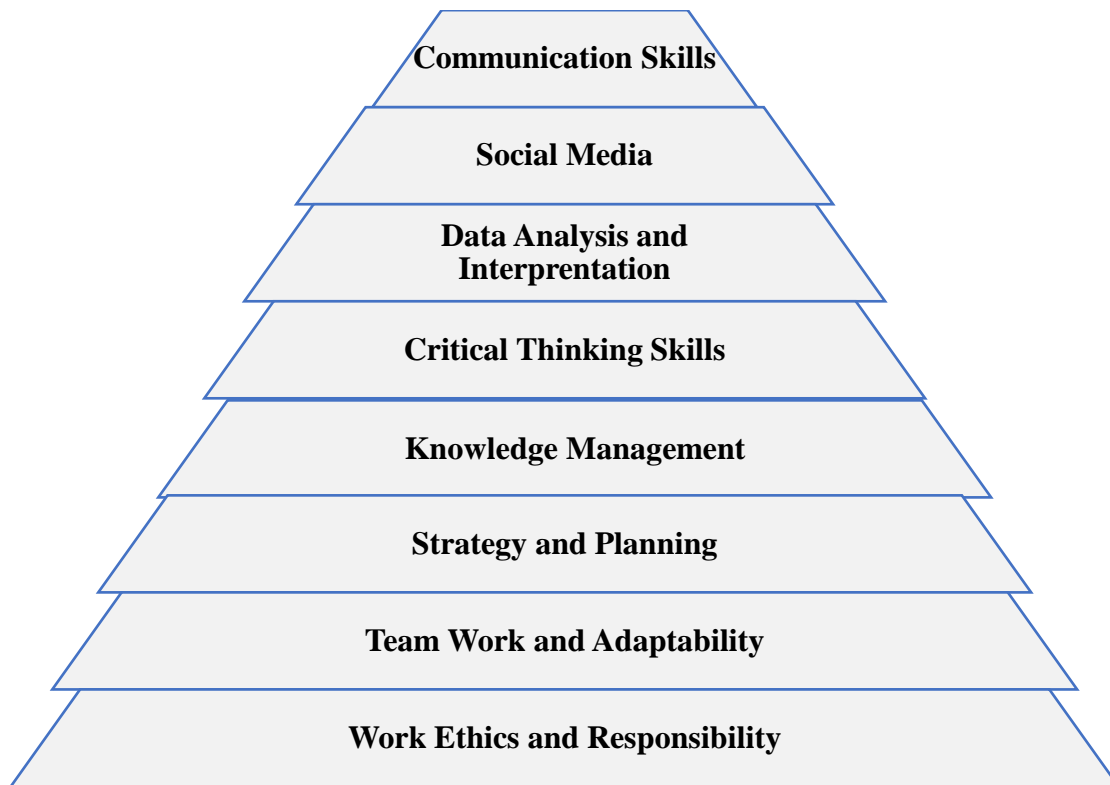


Source: Sreeradha Basu (2023), Just 45% of India’s Graduate Jobseekers Meet Industry Needs: Study, The Economic Times, 1st August.



Educational institutions are realising the need for re-structuring their education andragogy pattern, nature of skills imported to the students and its upscaling. (India skill Report, 2022).

**EXHIBIT: 4
KEY SKILLS FOR DIGITAL AGE**



Source: ISR, 2022 and Lagudor et.al (2020), Management and Leadership Skills, IT Skills, Numesacy Literacy and Skills

Bridging the gap between employability and unemployment's possible through self-assessment through strengthening individual job skills (ISR, 2022). It is the need of the hour to understand the need for self-assessing individual's employable skills to make one self-more suitable to the current job market requirement i.e., by building correlation between individual skills and the nature live hood they would expect to have.

CONCLUSION

Sound understanding of self-efficacy supports the engineering in upskilling their skill sets suitable to their career aspirations. Upskills of various skills mentioned in the above diagram, will in help the graduates to work with efficiency, without any error, work in co-ordination with colleagues feeling less pressure, stress and prevent from the feel of anxiety or burnout (Lalwan and Deepthi Vijayan, 2021).

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SOCIAL SKILLS ASSESSMENT IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER

**R. Viniba¹, R. Shanthi Victoria², M. Selva Madathi³,
B. Santhana Bharathi⁴, P. Rishika⁵**

¹Assistant Professor, St. Mother Theresa Engineering College, Tuticorin

²Assistant Professor, St. Mother Theresa Engineering College, Tuticorin,

³3rd Year CSE, St. Mother Theresa Engineering College, Tuticorin

⁴4³rd Year CSE, St. Mother Theresa Engineering College, Tuticorin

⁵3rd Year CSE, St. Mother Theresa Engineering College, Tuticorin

ABSTRACT

This paper presents assessing the children with Autism Spectrum Disorder (ASD) using Augmented Reality based games. These games are brought into the classrooms of students with autism which allowed the children to play with virtual and interactive screen. The aim of this paper is to make the treatment cost effective for those families already paying for expensive therapy sessions. These games are used to understand the unique strengths and weaknesses in the children which help the teachers and parents to handle them. In this paper, we present the games which improve the social interaction and hand-eye coordination.

KEYWORDS: Autism Spectrum Disorder, Communication Skill, Social Interaction.

I. INTRODUCTION

Autism Spectrum Disorder (ASD) is a deep rooted incapacity that can be recognized from the get-go in kids influencing their improvement capacities particularly concerning correspondence and communicating with others. The incapacity has been referred to dialect issues, for example, deferred reactions or very little to speech, perseveration and echolalia. Kids with such disability have genuine impedances with social collaboration and relational abilities[1][3]. Autistic Disorder frequently classified as childhood autism, weakens social, correspondence and creative energy capacities. Autism is related with the word 'spectrum' as range demonstrates that ASD changes between those influenced in view of the range in seriousness of the confusion. Asperger's issue and unavoidable formative issue are characterized under the umbrella of Autism or ASD[2].

As per Autism Spectrum Australia, there are three fundamental essential territories influenced in an individual with Autism[5]. These incorporate, powerlessness to impart, impedance in social communication and confined and monotonous interests, exercises and practices. Social communication is a typical trouble with most mentally unbalanced individuals[4]. They may confront dissatisfaction, uneasiness and hardship with regards to making and supporting friendships. Their comprehension of motions and outward appearances will in general be constrained in this manner causing battle with social and passionate responsiveness.

Austistic individuals may have issues with minding to impart interests and feelings with others as a piece of their conduct. Individuals experiencing Autism think that its hard to speak with other individuals thus PC recreations are utilized in this field[6].

II. EXISTING SYSTEM

Recently, the core concept of designing games for children with ASD was to be used as motivation and coaching on being comfortable with social interaction. The games developed for ASD patients are developed found on the website 'Autism Games'[7].

Traffic rules can be taught through a gaming model to autistic children. This model can be proposed in two different way are visual interface, tangible interface. A visual-spatial concept jigsaw puzzles for ASD children[15]. There are several common medical rehabilitations for autistic children. "Applied Behaviour Analysis" (ABA) is a method to set up an individual therapy using educational approach to stimulate children's behaviour to suit different autistic symptoms[8][9].

Puzzle game is created that stimulate two aspects which are shape distinguishing and spelling. Children will arrange blocks to construct shorts words[10][11]. The shapes are added as clues to assist the children to place the pieces together. After completing the game final results are shown to the children.[12]



Fig. 1. Puzzle Game

The individuals on the autism spectrum often have difficulties producing intelligible speech with either high or low speech rate, and atypical pitch and/or amplitude affect[13][14]. Over the course of 12 months, we have conducted several pilots to set up the experimental design, developed a suite of games and audio processing algorithms for prosodic analysis of speech. Primer outcomes show our mediation being drawing in and powerful for our members[16][17].

III. PROPOSED SYSTEM

To design instructive remedial and moderate amusements for youngsters with Autism Spectrum Disorder, two increased reality



Fig 2. Verification

Fig 2 illustrates the login function of each child. The staff or parent can contain the login information to open the game and starts playing.

A. Memory Game

The game contains 11 levels to improve the memory power of the children. In memory game, a picture will be shown at the first 15 seconds at the left screen then a child will find the correct picture from the collection of pictures which is shown at the right screen. At each level the timer has to be reduced and the collection of picture which is given at the right screen will be incremented using matrix representation.

recreations are proposed in this paper. The point of these diversions is to help kids with ASD to improve social connection and relational abilities. The two diversions are handling the creating social abilities in a typical kid.

The games are:

1. Memory Game
2. Speech Recognizing Game

Both games have been designed in such a way it is easy to understand by the autism children. To get a best result the games required a child-like design that would appeal children between the ages of 8 to 15. This meant the games needed to be designed with bright colors, sounds and known characters. The games are designed using C#. It is an object-oriented language. C# also have the advantage of readable code, modularity and scalable. The Memory Game uses the technique called selection and the Speech Game records the answer in the format of children's voice. Both games contain familiar images or objects. The children with ASD can easily understand the game with the help of employed staff. The games are designed to improve the comfortable environment of each child with ASD. The games are used to develop social interaction and hand-eye coordination through simple instructions and concentration.



Fig. 3. Types of games

Fig 3 illustrates the types of games to be chosen to play. The parent can select the game according to the capacity of the children.

A child can find the correct picture and displays star (Score) to improve the interactivity of the game, otherwise the game will be repeated until the correct picture to be found. The time taken by each child is stored in a database. After finishing the game it has been verified by the staff and parent in order to monitor the variation of memory level. By using this we can frequently monitor the autism level of the children. The more training can reduce the autism level.

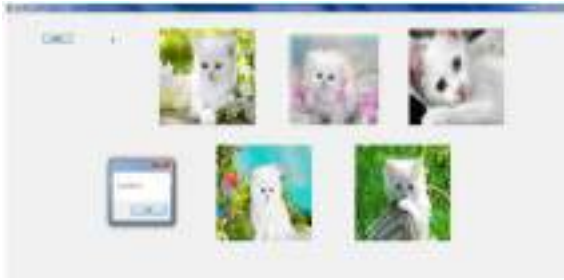


Fig.4. level 3

The Fig.4 illustrates the level of memory game. Here the cats are used as display picture. Also the children can understand the cats.



Fig.5. Score Card

The Fig 5 illustrates the stars, that is a score card for the children and it makes the game more interesting.

B. Speech Recognizing Game

The speech recognizing game gives the audio of the input emotion and a child has to speak the exact word with voice through mike. After receiving a child voice the game will provide the output emotion in words. The word must be in grammatical pronunciation. Through this the staff can understand the speaking

capacity of each child. Here there are five levels to improve the speaking capacity. The stars are used to encourage the children and it is like a score card. The children should pronounce the words correctly. Otherwise, repeat the process. This can implement the children to speak in some more days. The input emotions are used in real time.



Fig.6. Level 1

The Fig 6 illustrates the emotion of emoji and different emotions can be studied by the children through the staff or parents.



Fig.7. Score Card

The Fig 7 illustrates the score card of each level and stars are used to encourage the children's interaction.

C. Performance Representation

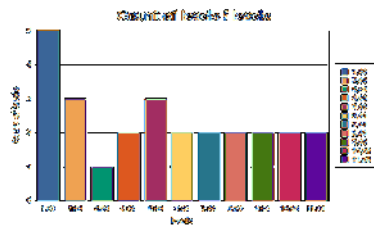


Fig.8. Performance Graph

The graph represents the performance of each child. Here x axis represents the number of levels and the y axis represents

number of attempts in each level. Using this graph the staff can understand the entire performance of the children.



IV. CONCLUSION

The paper presented two games are used in Autism Spectrum Disorder therapy sessions and focusing on memory power and speaking skills. The games were developed using C# language. The memory game can be implemented in a projector to improve the interaction. The speech recognizing game has the ability to make them speak. The children have the better social skills interaction through the games.

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CREMATORIUM WORKERS AND THE STRUCTURE OF BURIAL GROUNDS IN THENI DISTRICT, TAMILNADU

Dr. C. Muniyandi¹, S.Vaishnavi Devi²

¹Assistant Professor, Department of Econometrics, School of Economics, Madurai Kamaraj University, Madurai

²Research Assistant, Department of Econometrics, School of Economics, Madurai Kamaraj University, Madurai

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ABSTRACT

Crematorium and the structure of burial grounds works as described in the treaties. The structure of burial grounds, whether traditional cemeteries or newer memorial parks, varies widely but generally includes designated areas for burial plots on niches, pathways landscaping, and sometimes facilities for visitor. It have been analyzed important features of structure of the burial grounds. The aim of the study the create a space that gives the crematorium in the study area. Preparation burial ground workers prepare the deceased for cremation. This may involve removing items such as pacemakers or jewelry that could interface with the process. Objectives of the study focused on maintaining a serene and respectful atmosphere within the cemetery. To study the historical and cultural significance of the cemetery. Result of the study spaces provide not only places for physical interment or memorialization but also serve as environments for contemplation, remembrance, and healing for families and communities. Together, crematorium workers and the design of burial grounds contribute to the meaningful and respectful handling of human remains and the facilitation of mourning and remembrance processes across diverse cultural and societal contexts. Findings of the study an Emotional distress due to exposure to death and grief .Physical demands of the job, including heavy lifting and long hours. Limited resources and support for mental health. High turnover rates due to stressful work environment. The structure of burial grounds can impact the dignity and respect afforded to the deceased, as well as the comfort and safety of mourners. Conclusion of the study crematorium workers and the structure of burial grounds are integral components of how societies manage and honor the deceased. Crematorium workers perform essential duties in the process of cremation, ensuring that it is conducted with care and respect. They play a vital role in handling human remains and supporting families during a difficult time. Meanwhile, the structure of burial grounds, whether traditional cemeteries or modern memorial parks, reflects evolving cultural, environmental, and personal preferences surrounding the final resting places of loved ones.

KEYWORDS: structure of burial grounds, whether traditional cemeteries or modern memorial parks, reflects evolving cultural.

INTRODUCTION

This study aims to analysis the structure of burial grounds in the final disposition and the dead body is placed into the ground. Crematorium workers play a crucial role in the process of cremation, which involves the respectful burning of human remains to ashes. The structure of burial grounds, whether traditional cemeteries or newer memorial parks, varies widely but generally includes designated areas for burial plots or niches, pathways, landscaping, and sometimes facilities for visitors.

Objectives

1. To focus maintaining a serene and respectful atmosphere within the cemetery.
2. To study the historical and cultural significance of the cemetery.
3. To focus offering compassionate and professional support to bereaved families.

Review Of Literature

Study by Smith et al. (2019), “Mental Health of Crematorium Workers: An Empirical Study.” This study examined the mental health of crematorium workers in the United States, finding that a significant number experienced symptoms of depression, anxiety, and PTSD. The constant exposure to death and grieving families was identified as a major stressor.

Jones and Anderson (2020), “Occupational Stress among Burial Ground Workers.” Research on burial ground workers in the UK revealed high levels of occupational stress, with many workers reporting feelings of isolation and emotional exhaustion. The study emphasized the need for better mental health support systems within the profession.

Martinez et al. (2018), “Coping Mechanisms among Crematorium Workers in Spain.” This study explored the coping mechanisms of crematorium workers in Spain. It found that many relied on humor, strong social bonds with colleagues, and compartmentalization to manage the emotional toll of their work.



At the time of Rituals Structure of burial ground

1. Preparation, they prepare the deceased for cremation, which may involve removing items such as pacemakers or jewelry that could interfere with the process.
2. Cremation Process, they oversee the loading of the deceased into the cremation chamber and ensure the proper operation of the equipment during the cremation process.
3. Ash Processing, After cremation, they assist in processing the cremated remains (ashes), which are then typically placed in an urn or container chosen by the family.
4. Documentation, they maintain accurate records of each cremation, ensuring legal and administrative requirements are met.
5. Traditional Cemeteriesthese often have designated sections for burials, where graves are marked with

headstones or markers. They may also have chapels for funeral services and landscaped areas for visitors.

6. Memorial Parks these are newer concepts that often feature more natural landscaping and simpler markers. They may also include options like scattering gardens for ashes or memorial walls.
7. Environmental Considerations Modern burial grounds increasingly consider ecological impacts, such as using biodegradable urns or allowing natural burials that avoid embalming chemicals.

Both crematorium workers and the structure of burial grounds aim to provide respectful, dignified, and culturally appropriate ways to handle human remains and provide spaces for remembrance. Each plays a crucial role in supporting families during times of loss and honoring the deceased according to various cultural, religious, and personal preferences.

Structure of the Crematorium, Theni District: Theni Taluk



Theni District: Bodinayakanur Taluk

We have visited the crematorium in Kodangipatti, Theni district to learn about the cremators. There are 4 workers working in the crematorium in this village. When there is no work in the crematorium, they also do work such as, beating urumi and drums. In this village they only bury dead bodies. They don't burn dead bodies. If someone dies in the 5 villages they are like ammapatti, dombucheri, uppukottai, kulaiyanur, silamalai. In the district, they are taken to the electric crematorium in theni for cremation. They are getting wages in 2000Rs to 3000Rs for a bodies and purchase the materials required for burial with

that. The four people who work there share the money. They said that digging a pit to bury a dead body takes 3 to 5 hours and each community has it is have for separate cremation ground. There is one for the scheduled caste and one for the upper caste. These people also go to the graveyard near the church to help. They said that they are involved in this work because of their family situation and because their father and forefathers were involved, they also do Vettiyan work. We asked what kind of help you would seek from the government. For that they need permanent work and permanent pay. They said that it would be good if we got it.



Theni District: Theni Taluk

We went to electrical cemetery near Theni District Old Bus Stand. It was good Maintained clean and hygienic. Total five people working including four male employee and one female employee. One female takes care of garbage and other cleaning work there. For cremation of a dead body 3500Rs should be booked and receipt received. Relatives bath the dead bodies in the hall near the cremation ground and perform rituals. The relatives of the dead bodies have a place like a shade house to sit and the ashes obtained from the dead bodies are put in a separate urn and kept in a separate room. It takes at least 1 hour or 2 hours to burn the dead bodies on the crematorium. Fatty bodies burn quickly. Lean dead bodies take a while to burn. They don't even go home to eat. They eat at the places in the crematorium. In the crematorium in Theni, they burn dead bodies only from 10 am to 5 pm. The monthly salary of a cremator is 8000Rs and 6000Rs for female employee. They said that cremation is allowed only if you pay 3500 rupees in advance to cremate them. They maintain a peaceful and healthy environment. They said that maximum 10 to 12 corpses come in a month and 10 to 12 villagers in the surrounding area bring their relatives to Theni electrical cemetery when they die.

Theni District: Periyakulam Taluk

We went to the cemetery in the village of Kengwarpatti in Theni district to find out about the Vettiyan workers. Four people have engaged in the burial ground work. They have a monthly salary of 8000 Rs from the panchayat. They said that they get 2500 Rs for burial and cremation and well-off people pay up to 3500 Rs. They also said that when there is no work in the agriculture, they go to agriculture and allied activity. One of these four people said that he used to clean the office in the morning and evening and earn 2000 Rs per month they do cremation for 18 castes. The

bodies should be buried or cremated only in the crematorium of that particular caste. Otherwise, he was saddened by saying that the relatives of the dead body would come to fight with the Vettiyan. He was upset saying that he got burnt while burning the dead body and when he asked for help from the people of the village, but they did not help me. He said that he has a son who comes to help occasionally. He also said that he has kept his savings in the post office. We asked what kind of help you want from the government. For that he is currently giving us salary from the panchayat. They asked that it would be good if the government gives us permanent work and permanent income in the work.

Theni District: Allinagaram Taluk

We went to a village under Allinagaram municipality of Theni district to know about the cemetery workers. A total of three persons were said to be working on cremation. They said that when there are no corpses for burial, they can go to any other job or do cleaning work like drainage cleaning. They said that their monthly income is between Rs8500 to Rs10000. They said that their mind is very bad. They are called scavengers. No one treats them like an average person. Because working in the cemetery hurts them. People hesitate to even talk casually. Often people dump their garbage in cemeteries, and when there are no corpses, the garbage in the cemetery is taken and separated into biodegradable and non-biodegradable garbage. They not only do the work of the cemetery but also do the cleaning work. People discriminate against them and do not treat them equally. When the dead bodies arrived, they told the cemetery workers there that the relatives of the deceased used to abuse them when they were drunk and sometimes beat them. We should be respected as fellow human beings. They asked that it would be good if we get monetary help or monthly income.





Crematorium in the factors

1. A bath tub is set up in the cemetery in every town.
2. The cremation platform is square slightly elevated and smoke –proof.
3. Burial pits in villages have no place for relatives to sit dead bodies.
4. In Electric cemetery there is a place for relatives to sit.
5. There is also are Anjali mandapam, a meditation hall and a separate area for budding.
6. Ashes obtained from dead bodies are kept urns in a chamber.
7. They will bury the dead bodies according to the Christian method.
8. Muslims also only bury dead bodies. They will not cremate.
9. The cremation platform can only be moved by 2 persons together. After the cremation, there is a small square pit behind the crematorium where the ashes fall.

Findings

Research has shown that crematorium workers face various challenges, including:

- ❖ Emotional distress due to exposure to death and grief
- ❖ Physical demands of the job, including heavy lifting and long hours
- ❖ Limited resources and support for mental health
- ❖ High turnover rates due to stressful work environment
- ❖ The structure of burial grounds can impact the dignity and respect afforded to the deceased, as well as the comfort and safety of mourners

Conclusion

Crematorium workers play a vital role in honoring the deceased and supporting mourners. The structure of burial grounds is crucial for creating a dignified and respectful environment for both the living and the dead. By addressing the challenges faced by crematorium workers and optimizing the design of burial grounds, we can improve the overall experience for those involved in funeral services

Recommendations

For crematorium workers:

- ❖ Provide regular mental health training and support
- ❖ Offer flexible scheduling and breaks to manage workload and reduce stress
- ❖ Implement ergonomic solutions to reduce physical demands of the job
- ❖ Foster a sense of community and camaraderie among staff
- ❖ Design with accessibility and mobility in mind
- ❖ Incorporate amenities such as seating, lighting, and landscaping
- ❖ Ensure adequate maintenance and upkeep to maintain a sense of respect and dignity.

A sense of community and camaraderie among crematorium workers can help alleviate stress and promote job satisfaction.

The design of burial grounds can have a significant impact on the emotional well-being of mourners, as well as the dignity and respect afforded to the deceased. Regular mental health training and support can help prevent burnout and promote work-life balance among crematorium workers.

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INDIAN WRITERS DISSOCIATIVE WRITING AND ANALYSIS

Dr Farhanaz M
VSKUB

The linguistic structure of Indian literature forces us to consider the many histories of the state and its surroundings. The complex paths of nationalism and colonialism paved the way for modern Indian literature, which weaves historical narratives into artistic expression. Indian writers and legends have been influenced by the rise of independent India in many ways. Modern Indian literature is influenced by the religious, socio-economic confusion, divisions and divisions that have underpinned the political discourse of Indian society for the past 200 years. The partition of Indian land was very dangerous and took a long time. A revolution in the 19th century changed the writing styles of some Indian languages. The hatred and hatred that was provoked lasted for decades. Dissertation texts are writings that reflect the content of Dissertation. A new literary movement in the 20th century that can be compared to literature on the Holocaust, refugees, etc. of the movement in the post-colonial world During the 20th century, the world saw many divisions, including those between Israel and Palestine, Ireland and England, Germany (and of course of its integration), former Yugoslavia, Korea and Vietnam, etc.

The territorial division has caused great problems for people on both sides, and people's lives have been in limbo for a long time. A collection of articles in many languages refer to the human nature of these injuries. However, reflections are multifaceted because each new geographic region has its own spatial and cultural characteristics. In each case, a stronger government implements or oversees a separatist plan at the expense of a weaker one, creating a "national moment" that leads to renewed or new national identities. The territorial division has caused great problems for people on both sides, and people's lives have been in limbo for a long time. A collection of articles in many languages refer to the human nature of these injuries. However, reflections are multifaceted because each new geographic region has its own spatial and cultural characteristics. In each case, a stronger government implements or oversees a separatist plan at the expense of a weaker one, creating a national moment that leads to renewed or new national identities.

The default is multi-partition history. Although it started with the founding of the nation-states and the end of colonialism, it was established as a literary genre and established in the 1970s. In the complex ways of nation-state Over time, the breadth of divisive literature also became a site of contention for socio-political contests and cultural discussions. India is a country that has been divided into three separate divisions to form three independent states. According to the analysis of the schedule, the events of 1905, 1947 and 1971, and the new nation-states of India, Bangladesh and Pakistan, affected South Asia. The

process of decolonizing India was completed with the division of British India into the provinces of Bengal and Punjab. It is clear from this intricate process of socio-political and cultural development that language has a significant impact on how historical realities are integrated or disintegrated. Major components of this language-driven identity are Sindhi, Bengali, Hindi, Punjabi, and Urdu, which in still in the public consciousness a little sense of nationalism that is matched by literary endeavours. The reality of riots, bloodshed, refugee crises, psychological pain, and ultimately the legacy of loss has rocked the generation of Indian writers who have lived through the Partition catastrophe. Although it is widely acknowledged that about one million people died, academics have asserted that between two and three million people died; also, 75,000 women from various groups were raped, kidnapped, or went missing. According to recent studies, about 14.5 million people moved between East and West Pakistan (known as "Muhajir" and "Adbastu") and about 3.5 million disappeared. After thirty years, the migration to the eastern border continued until 1971. It shows how much death is still going on due to the partition process - "a complex human tragedy and trouble". From the "Great Calcutta Massacre" to the Nokhali Riots of 1946, strange and terrifying events took place all the way from Amritsar to Lahore, creating an impossible choice between the creation of a new, independent India and division of land.

This genre is mostly short stories and novels, but some plays and poems have been written about Partition. Although it would be difficult to list all the names here, some of the entries are very popular with readers and are highly recommended. Urdu and Hindi writers were the first in this field. Saadat Hasan Manto, the greatest writer on the history of partition in India, captured the people's reaction to partition while living the violence, instability and pain of partition in in his own life. Stories like *The Ghost of Thanda*, *Toba Tek Singh*, *Khol Do* and *The Dog of Titwal* can be interpreted as the greatest tributes to the pain of Partition ever written on the Indian scene. Faiz Ahmad Faiz wrote poetry with regularity during the riots. Many epitaphs were written by some Urdu and West Indian writers, such as the short story of Krishan Chander ("*Peshwar Express*"), Qaratolan Haider (*Agh Ki Daria*, 1959), Yashpal (*Jota Sach*, 1958), Naseem Hijazi (*Khak Aur Khoon*), Rehi Masoom Reza (*Ada Gaon*), Manohar Mangunkar (*Khem Der Gange*, 1964), Razia Bhatt (*Bano*), Intizar Hussain (*Basti*, 1979), Amrita Pitam (*Pinjar*, 1950), Bhisam Sahni (*Tamas*, 1987), K.S. Dougal (*Ma Peo Lay*, 1974), Khuswant Singh (*Train to Pakistan*, 1990), Kamalswar (*Kitne Pakistan*, 2000) and others. women's life KS Duggal released a collection of poems called *Band Derwaze* (1959) and a collection called



Dhoya Hoya Booha (Half Closed), after fifty years of separation.

Many writers who lived during the partition have argued about it. In his new book, *A Gujrat Here, A Gujrat There* (2017), Krishna Subti recently revealed how the strange memory of his childhood friend's murder during Partition has shaped his life. Now we can see a pattern due to the thematic structure of separatist violence and its ambiguity. However, the division theme used in modern fiction shows new trends after decades of stability. The muscle that has been bought has taken the place of the painful region. Restitution, transfer of property, border construction and citizenship are some of the issues that will be addressed. On the other hand, Bengali writers have achieved this feat only recently. However, Bandopadhyay's three voices of Tarasankar, Manik and Bibhutibhusan are seen side by side. The artist who best captures the Partition phase with the most human vulnerability is Ritwik Ghatak. Let Dhaka Tara, Kumalgandar and Subarnalatha be remembered for years to come. Honesty anchored refugee time in Nemai Ghosh's *Chinnamul*. Writers like Jibananda Das (*Jalpahiati*), Amarendra Ghosh (*Bhangche Sudhu Bhangche*), Narendranath Mitra (*'Palanko', Chenamahala*), Amiyabhusan Mazumder (*Nirbas, Garh Srikhandra*), Santa Sen (*Pitamahi*), Annadasankar Ray (*Krantodarshi*), Narayan Sanyal (*Bakultala PL Camp*), Sunil Gangopadhyay (*Arjun, Purba Pashchim*), Samaresh Basu (*Saodagar, 'Adab'*), Jyotirmayee Debi (*E-par Ganga O-par Ganga*), Atin Bandopadhyay (*Nilkantha Pakhir Khoje, Manusher Gharbari, Iswarer Bagan Trilogy*) Gour Kishore Ghosh (*Jal Pore Pata Nare, Prem Nei*), Prafulla Ray (*Kea patar Nouko, Satodharay Boye Jay*), Debes Ray (*Barisaler Jogen Mandal, 'Refugee'*), Shirsendu Mukhopadhyay (*Ghunpoka*), Hasan Azizul Huq (*Aagunpakhi*), Amar Mitra (*Dhulomati*), Dashami Dibase, Kumari Megher Desh Chai) contributed to the corpus.

Internationally renowned Indian English writers or NRI writers have also used the partition subject as the main idea in their works of fiction. Several notable authors include Bapsi Sidhwa (1989) for *Ice Candy Man*, Amitava Ghosh (1988) for *The Shadow Lines*, Jhumapa Lahiri (1999) for *Interpreter of Maladies*, Shauna Singh Baldwin (2001) for *What Body Remembers*, and Rohinton Mistry (2001), for *A Fine Balance*. There are several examples of non-fiction and autobiographical works that have been published in the decades that have followed, either in Bengali, Hindi, or English. Dayamayeer Katha a Sunanda Sikder, *Sunlight on a Broken Column* av Atia Hossain, and Supuri Boner Sariav Sankha Ghosh.

Since the 1950s, Indian Partition history has advanced significantly. It was devoted to "high politics" for the first fifty years, but as time went on, fresh perspectives on caste, feminism, and other issues were added. The non-fiction narrative continues with argument and counterargument, ranging from *Pakistan or Partition of India* (1945) by B.R. Ambedkar, *Awake Hindustan!* (1945) by Dr. Shyamaprasad Mukherjee, *Divide & Quit* (1961) by Penderal Moon, *Freedom at Midnight* (1975) by Larry Collins & Dominique Lapierre, to *India Wins Freedom* (Moulana Abul Kalam Azad). Hiranmoy Bandopadhyay wrote *Udbastu* in Bengali, detailing his

experience working as a government officer in charge of rehabilitation.

Another enormous individual effort to investigate records of refugee rehabilitation and their status in West Bengal is Parfulla Chakrabarty's *The Marginal Men*. Numerous biographical narratives have been written, such as *Bharat Keshari Jugapurush Shyamaprasad* by Tathagata Ray, *Amar Jibon O Bibhagpurba Banglar Rajniti* by Abul Hashim, *Jukto banglar Sesh Adhyay* (on Fazlul Huq) by Kalipada Biswas, and *Amar Dekha Rajniti Panchas Bachor* by Abul Mansur Ahmed. Notable works include the following: *Vazira Faizala-Yacoobali Zaminder's The Long Partition*; *Yasmin Khan's The Great Partition*; *Anam Zakeria's The Footprint of Partition*; *Aanchal Malhotra's Remnants of a Separation*; *Anannya Jahanara Kabir's Post Partition Amnesia*; *Pippa Verdi's (From the Ashes of 1947)*; *Jaya Chatterjee (Bengal Divided, Spoils of Partition)*; *Ayesha Jalal (The Sole Spokesman, The Pity of Partition)*; and etc. Third-generation writers have attempted to fictionalize Partition, as evidenced by works like as *Bhaswati Ghosh's Victory Colony* (1950), *Anjali Enjeti's Parted Earth* (2021), and *Nisid Hajri's Midnight's Furies* (2015).

CONCLUSION

Readers and academics worldwide have paid close attention to partition literature during the past few decades. A vast body of literary works about the Indian subcontinent that were divided three times need to be read again in the current light. There are a ton of writings in the partition literary categories in Hindi and Urdu. In contrast, because they haven't been translated into Hindi or English, Bengali works about Partition are a little hazy on a national level. There has been a noticeable zeal in this sector lately for the exploration of fresh storylines from Partition literature translated into English. In South Asia, the Partition theme is thriving thanks in large part to agencies and publishing organizations. However, new genres like *Borderland studies*, *Migration studies*, *Dalit studies*, *Memory Studies*, and other interconnected state affairs evolved after Partition as a result of the complicated trajectories of the Partition in the Indian subcontinent and its neighboring countries. As a result, it appears that the emphasis has moved to typical border lives with various strata of subsistence. A rereading of Partition literature might be seen as an exposition of the new existence of the Indian subcontinent after 75 years of independence.

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THE INFLUENCE OF INQUIRY-BASED LEARNING ON INTEGRATED SCIENCE PROCESS SKILLS OF COLLEGE STUDENTS IN TAGUM CITY: BASIS FOR AN INTERVENTION PLAN

Alje Marie M. Canoy

*Master of Arts in Education major in Teaching Science, St. Mary's College of Tagum, Inc.
Graduate School Department, Tagum City, Philippines*

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ABSTRACT

The study aimed to determine the influence of inquiry-based learning on integrated science process skills. The result of the study was used to craft an intervention plan that will help enhance science process skills among college students. A descriptive-correlational design was employed. The 249 college-level respondents, enrolled in laboratory courses, were selected through stratified random sampling from four schools and universities in Tagum City. The study used two adapted and validated research questionnaires. Mean, standard deviation, Pearson r , and linear regression analysis were used as the statistical treatment of the study. The overall mean on the level of inquiry-based learning has resulted in 4.49 with a standard deviation of 0.67. The descriptive equivalent for the level of inquiry-based learning is very high. The homogeneity of responses has a computed standard deviation of 24.39 and a moderate descriptive equivalent which means that the indicator science process skills is fairly manifested. The result revealed that there is no significant relationship between inquiry-based learning and science process skills among college students in Tagum City. Based on the study results, an intervention plan has been developed to enhance students' integrated science process skills. This plan includes strategies for teachers to promote integrated science process skills among students, such as alternative teaching methods, targeted skill development, teacher training, curriculum integration, assessment and feedback mechanisms, student engagement techniques, and ensuring resource availability.

KEYWORDS: Science Education, inquiry-based learning, integrated science process skills, descriptive and correlational design, Tagum City, Davao del Norte, Philippines

INTRODUCTION

In the science learning process, students' science process skills have not grown to their full potential (Ernawati et al., 2021). Science instructors must give integrated science process skills development top priority to promote students' critical thinking and help them draw conclusions that are consistent with scientific principles. (Muzzazinah et al., 2020). Furthermore, college students must have a firm grasp of integrated science process skills because doing experiments is essential to science education (Idris et al., 2022).

In Turkey by Fugarasti et al. (2019), only 56% of the 75 questions about integrated science process skills were correctly answered by college students, indicating a need for further development of their integrated science process skills. Furthermore, according to a study conducted at one Indonesian university, instructors failed to include integrated science process skills in their lectures, which is why college students' science process abilities were rated as low with a percentage of 44 (Tahir, 2019). Additionally, the results for Malaysian university students showed a mean score range of 7.5–9.6, meaning that the respondents could not correctly answer 50% of the questions out of 40 total number of items, about integrated science process skills and could not pass the test because they have low understanding of integrated science process skills (Kamarudin et al., 2022).

One of the Universities in Leyte has attained the lowest percentage of 35.97%, in the integrated science process skills test among college students. Furthermore, the student's scores fell short of the ideal passing level in all indicators of integrated science process skills. (Libres, 2019). Another study by Barosa (2018) at a Manila university revealed that college student exam scores ranged from 20.40% to 46.67%, indicating that the results are poor and that an intervention is required to improve the integrated science process skills. In separate investigation, it was discovered that Los Baños college students have poor integrated science process skills, with means of 16.69 and 16.84 for the control and experimental groups, respectively out of 40 total number of items (Guevara, 2023).

In a study by Cabande et al. (2021) in one of the universities in Tagum City, it was noted that there is a growing concern about the low proficiency levels of integrated science process among college students in this locality as shown in their performances in class and laboratory activities. In addition, the findings of the study of Zabala and Dayaganon (2023), conducted in Davao City, Philippines, demonstrated how the integrated science process skills of the college students were inadequately developed, as evidenced by their lack of competence and reliance on their instructor to conduct laboratory activities.



A review on literatures reveals that one of the factors that may contribute to integrated science process skills is inquiry-based learning used in education setting (Biswal & Behera, 2023; Ekici & Erdem, 2020; Nunaki et al., 2020). There were already studies which involve the connection between the said variables (Nunaki et al., 2020; Sahintepe et al., 2021; Mulyeni et al., 2019). However, the indicators employed for inquiry-based learning were different from those previously mentioned, and the study participants in the aforementioned research are international students. Furthermore, no previous research involving these two factors has been reported in the locale, and no studies that give an intervention plan that links the two variables—*inquiry-based learning and integrated science process abilities* have been completed yet. This study examines the influence of inquiry-based learning on integrated science process skills of college students in Tagum City as basis for an intervention plan.

Integrated science process skills of college students are crucial in understanding bigger concepts in science. Blended learning only recently transitioned back to face-to-face classes, leading to stagnation of these skills for years due to students' inability to perform laboratory activities during the pandemic. The urgent concerns about the low integrated science process skills of college students motivate the researcher to conduct the study to find the gaps through scientific investigation of the variable *inquiry-based learning* that contributes to the integrated science process skills of college students in Tagum City. It is essential to comprehend how contemporary teaching methodologies, such as *inquiry-based learning*, affect college students' integrated science process skills considering that if this problem will not be addressed, students will have difficulty in applying these skills in their fields later on.

This study examines the influence of inquiry-based learning on the integrated science process skills of college students in Tagum City and aims to assist educators by providing an intervention plan to support and enhance these skills through innovative strategies. The results of this study will provide data-driven solutions to the administrations in order to improved integrated science process skills and inquiry-based learning. Findings of the study will be shared by submitting a copy of the article to the graduate school office, the school library, and through presentations at fora and research conferences both national and international. For the benefit of upcoming researchers, the work will also be published.

RESEARCH QUESTION

This study aimed to determine the influence between integrated science process skills and inquiry-based learning practices of college students in Tagum City and develop an intervention plan based on the findings of the study.

Specifically, this study sought to answers the following questions:

1. What is the level of inquiry-based learning of college students in Tagum City in terms of:
 - 1.1. student participation;
 - 1.2. paying attention to ideas;
 - 1.3. collaborations;
 - 1.4. learning;
 - 1.5. asking questions;
 - 1.6. observation; and
 - 1.7. focusing on problems?
2. What is the level of integrated science process skills of college students in Tagum City in terms of:
 - 2.1. identifying and controlling variable;
 - 2.2. stating hypothesis;
 - 2.3. operational definitions;
 - 2.4. graphing and interpreting data; and
 - 2.5. experimental design?
3. Is there a significant relationship between inquiry-based learning and integrated science process skills?
4. Does inquiry-based learning significantly influence integrated science process skills?
5. What intervention plan can be created based on the findings of the study?

HYPOTHESIS

The following are the hypotheses were tested at 0.05 level of significance.

1. There is no significant relationship between inquiry-based learning and integrated science process skills of college students in Tagum City.
2. Inquiry-based learning does not significantly influence integrated science process skills.

METHODS

This quantitative study utilized descriptive correlational design. To accomplish the study goal, the researcher will employ this design to ascertain and accurately characterize the respondent degrees of integrated science process skills and the degree of inquiry-based learning. Multiple choice tests and survey questionnaires will be employed in the research to get numerical data from the respondents. On the other hand, correlational research is used to determine to test and determine the existing relationships of the variables of this study. The goal of how inquiry-based learning greatly influences integrated science process skills is also explored.

The respondents in this study are college students enrolled in science courses with laboratories for the academic year 2023–2024 at the four Tagum City schools or universities that are chosen. The researcher determined the sample size using the Online Raosoft Sample Size Calculator, which has a 95% confidence level and a 5% margin of error. A sample size of 249 respondents was computed from the estimated 700 college students enrolled in the four schools or universities.

To determine how many students will be randomly chosen for each school or university, the stratified random sampling technique will be employed. A sampling method called stratified random sampling divides a population into smaller subgroups known as strata (Williams, 2023). The four institutions or colleges that were chosen for this study made up the four strata. The sample size per stratum is determined through ratio and proportion to determine that School A, with estimated 200 students, had 71 student responders, School B, with estimated 200 students, had 71 student responders, School C, with estimated 150 students, had 54 student responders and School D, with estimated 150 students, had 53 student



responders.

RESEARCH INSTRUMENTS

Two survey questionnaires were purposively chosen and adapted to collect data that answered the research questions of the study. To ensure content validity, the study tools undergoes validation by experts in the field of study. After incorporating suggestions of validator, the tools undergo pilot testing to ensure that it is reliable to be used in the study.

Inquiry-based Learning Environment Scale (IBLE). This questionnaire developed by Sarioglan (2021) was used in the study to measure the variable, inquiry-based learning. The adapted validated questionnaire has 40 items that are divided into seven indicators: student participation (7 items), Paying attention to ideas (6 items), collaboration (7 items), learning (5 items), asking questions (5 items), observation (5 items), and focusing on problems (5 items). This instrument undergone factor analysis for validity and reliability. The value of the Cronbach alpha for the total scale based on the pilot testing was 0.815 indicating that it has adequate reliability. On a five-point Likert scale, participants will rate their level of agreement with each statement (with 1 indicating strong disagreement and 5 indicating strong agreement). The following parameter limits, descriptive equivalents, and interpretation will be considered during the interpretation of results.

Test of Integrated Science Process Skills. This instrument was developed by Monica (2005) to measure the level of science process skills of the students. This multiple-choice questionnaire has 30 items in total that is separated into five indicators which are identifying and controlling variables (7 items), stating hypothesis (6 items), operational definition (6 items), graphing and interpreting data (8 items), and experimental design (3 items). The responses for multiple-choice questions will be coded with one-point for every correct answer and zero for every incorrect answers. The percentage of the test score will be computed by dividing the number of correct responses with the total number of items which is 30 and multiply it to 100. The following parameter limits, descriptive equivalents, and interpretation will be considered during the interpretation of results.

REVIEW OF RELATED LITERATURE

Integrated Science Process Skills

These are the abilities that support learning in the physical sciences, guarantee student engagement, help students grow a sense of ownership over their education, lengthen the learning process, and help students pick up research techniques and methods—in other words, they guarantee thinking and acting like scientists. Science Process Skills (SPS) are transferable skills that mirror the actions of scientists and are relevant to a wide range of sciences (Dolapcioglu & Subasi, 2022). Science process skills are foundation of scientific method and it is very important in science education (Hardianti & Permatasari, 2023).

Science process skills, or SPS, are the capacity to apply scientific methods to generate knowledge, understand, develop, and find science in order to resolve problems and provide outcomes (Rusmini & Rudiana, 2021). There are two types of

science process skills: integrated science process skills (integrated SPS) and basic science process skills (basic SPS). Integrated SPS included identifying and controlling variable; stating hypothesis; operational definitions; graphing and interpreting data; and experimental design (Ahmed et al., 2023).

Students use science process skills as instruments to learn concepts and conduct investigations into the world around them. Because of this, educators must prepare their students to comprehend and use these skills in the lessons they teach (Kusuma & Rusmansyah, 2021). Several studies and research projects have recognized the importance of mastering science process skills. It is a goal to address problems and provide workable solutions (Manes et al., 2022). In contrast to teacher-centered approaches, student-centered methods in science classes were found to have a beneficial impact on students SPS (Ozge & Sulayman, 2022).

Inquiry-Based Learning

Inquiry-based learning, is an instructional strategy that promotes problem-based learning and experience learning among students which draws students in and makes connections between the classroom and the real world (Main, 2023). In the study conducted by Majeed et al. (2023), students who participated in instruction had superior science process skills than those who received traditional instruction.

The findings of the study conducted by Ekici and Erdem(2020), students who participate in inquiry-based laboratory activities have the opportunity to enhance their science process abilities and increase their retention and learning. The findings of the study conducted by Gonul and Motsu (2021) demonstrate that students in the experimental group that used inquiry-based learning made improvements in their ability to run experiments, define operationally, evaluate data, develop relationships among variables, and formulate models.

Additionally, it was discovered that the inquiry-based learning facilitates student application of the concepts they acquire—that is, their science process skills—by using questioning (Borrol & Valls, 2021). It was further asserted that subjecting pupils to challenging and comprehensive inquiry-based exercises helps them become proficient in science process skills. Furthermore, Tan et al. (2022) study stressed the benefits of inquiry-based learning, which can be even more effective depending on the subject matter and aids in improving student conceptual knowledge and scientific process.

In addition, students can use the inquiry-based learning paradigm to investigate, forecast, experiment, and make decisions by conducting independent investigation on science-based issues and challenges (Panjaitan, 2020). In response to the verdicts of Baharom and Atan (2020), it is strongly advised that scientific training be enhanced with technology devices through the use of an inquiry-based science education strategy. This would help students better comprehend science process skills. According to Wale and Bishaw's (2020) research, inquiry-based learning entails gathering data, conducting research, and formulating questions. There was a noteworthy distinction in the experimental and control groups' general,

high-level, and integrated SPS levels after receiving instruction utilizing the inquiry-based learning.

The results of the study of Biswal and Behera (2023), show that inquiry-based learning improves students scientific process skills. The inquiry-based learning provides students with learning opportunities that are enriched by all-encompassing perspectives from their environment. Students thus have the

THEORETICAL FRAMEWORK

This study is based on Lev Vygotsky's social learning theory, which holds that students actively participate in the construction of their own knowledge and that learners learn effectively as active participants and not passive learners. Inquiry-based learning allows students to be active participants in learning through inquiry that will influence the students' integrated science process skills (Detel, 2001). This theory is supported in the results of the findings conducted by Sen and Vekli (2016) which stated that inquiry-based learning significantly influences integrated science process skills and the result of the study conducted by Ceylan and Gülsah (2016), stated that the inquiry-based learning positively influences integrated science process skills.

Moreover, the study conducted by Mutlu et al. (2020), supported the claims which indicates that inquiry-based learning helps in the improvement of integrated science process skills. The results of the study of Lati et al. (2012) also proves the connection of inquiry-based learning and integrated

chance to take part in real- world activities that support the growth of science process abilities. Additionally, it excels at helping student study both independently and during class activities. Student capacity to conduct experiments and their understanding of scientific phenomena are both enhanced by inquiry-based learning

science process skills. Furthermore, in the study conducted by Sutrisno et al. (2017), they mentioned that integrated science process skills among students was improved in the implementation of the inquiry-based learning.

Linking the proposition of the various author previously presented led to the conceptualized model shown in Figure 1. The independent variable of this study is inquiry- based learning which has the indicators namely: student participation, paying attention to ideas, collaborations, learning, asking questions, observation, and focusing on problems Sariođlan (2021). The dependent variable is the integrated science process skills with the following subscales identifying and controlling variable, stating hypothesis, operational definitions, graphing and interpreting data, and experimental design (Monica, 2005). The results of the findings of the relationship of inquiry-based learning and science process skills will lead to the crafting of intervention plan.

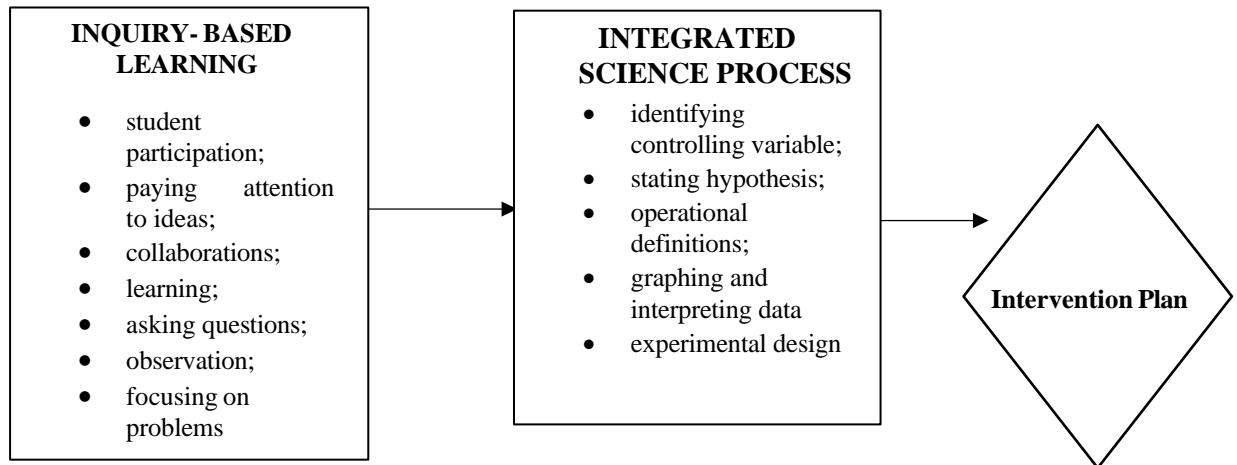


Figure 1. Conceptual Framework of the Study

RESULTS AND DISCUSSIONS

Table 1
 Summary on the Level of Inquiry-based Learning

Indicators	SD	Mean	Descriptive Equivalent
Student Participation	0.68	4.47	Very High
Paying Attention to Ideas	0.64	4.59	Very High
Collaboration	0.65	4.51	Very High
Learning	0.65	4.52	Very High
Asking Questions	0.68	4.47	Very High
Observation	0.66	4.48	Very High
Focusing on Problems	0.71	4.36	Very High
Overall Mean	0.67	4.49	Very High



The overall mean based on table 8 has resulted in 4.49 with a standard deviation of 0.67. The descriptive equivalent for inquiry-based learning is very high. The summary of the level of inquiry-based learning of the college student Tagum city in is very much evident based on the responses. This suggests that inquiry-based learning engages students through exploration and insightful questioning, fostering real-world connections. It also highlights a student-centered approach that prioritizes questioning and scientific inquiry techniques. The standard deviation of 0.67 (SD 1.00) indicates that the rating of the respondents is closer to the mean which means that the responses are almost the same.

This result is similar to the study of Biswal and Behera (2023), show that inquiry-based learning is strongly evident wherein it provides students with learning opportunities that are enriched by all-encompassing perspectives from their environment. Another similar results in the study of Wale and Bishaw's

(2020) research, inquiry-based learning entails gathering data, conducting research, and formulating questions. In addition, students can use the inquiry-based learning paradigm to investigate, forecast, experiment, and make decisions by conducting independent investigation on science-based issues and challenges (Panjaitan, 2020).

There is also a plainly noticeable inquiry-based learning in the study of Ekici and Erdem, (2020) as reflected on the students who participate in inquiry-based laboratory activities. The readily apparent result on the level of inquiry-based learning according to Tan et al. (2020) is when student is subjected to a challenging and comprehensive inquiry-based exercises that facilitates student application of the concepts they acquire. In the study conducted by Majeed et al. (2023), students who participated in inquiry-based learning had a very much evident result than those who received traditional instruction

Table 2
Level of Science Process Skills

Indicators	SD	Mean	Descriptive Equivalent
Identifying and Controlling Variable	28.47	62.65	High
Stating Hypothesis	20.85	41.63	Moderate
Operational Definitions	26.61	43.24	Moderate
Graphing and Interpreting Data	23.39	34.59	Low
Experimental Design	25.60	31.59	Low
Overall Mean	24.98	42.74	Moderate

The level of integrated science process skills of college students has an overall mean of 42.74 and a descriptive equivalent of moderate. It indicates that integrated science process skills are fairly manifested. It emphasizes students' development of essential competencies such as identifying variables, formulating hypotheses, defining operations, graphing and interpreting data, and designing experiments within the framework of scientific learning is reasonably displayed. A standard deviation of 24.98 indicates that the rating of the respondents is clustered to the mean which means that the responses are homogenous, highlighting the indicator stating the hypothesis with a standard deviation of 20.85 with a close level of dimension of the science process skills.

The study of Fugarasti et al. (2019), also have a fairly manifested result of their study. The results shows that only few of the

questions were answered correctly by the college students. Similar results were also highlighted in the study of Kamarudin et al. (2022), it was further explained that this result was because there is a need to demonstrate a higher level of performance in the basic science process skills as these are necessary to develop more complex integrated science process skills which are required for the learning and understanding of the content at higher levels.

The level of integrated science process skills in the study of Jardinico and Linaugo (2023) shows that is moderate and fairly manifested among college students. Students use science process skills as instruments to learn concepts and conduct investigations into the world around them. Because of this, educators must prepare their students to comprehend and use these skills in the lessons they teach (Kusuma & Rusmansyah, 2021)

Table 3
Relationship Between Inquiry-based Learning and Science Process Skills

Variables Correlated	r-value	p-value	Remarks	Decision
Inquiry Based Learning and Science Process Skills	0.008	0.902	Not Significant	Null hypothesis is rejected

The relationship of inquiry-based learning and science process skills is also not significant in the study of Nurhayati et al. (2021). Another study conducted by Li et al. (2024) results shows that there is no significant relationship between the

variables inquiry-based learning and science process skills. Integrated science process skills are foundation of scientific method and it is very important in science education (Hardianti & Permatasari, 2023).



However, studies of Biswal and Behera (2023) shows that there is a significant relationship among inquiry-based learning and science process skills which is thought to be

opposite to the result of this study which is no significant relationship. Same is true with the Sahintepe (2020) showing a relationship between two variables.

Table 3
The Influence of Inquiry-based Learning on Integrated Science Process Skills

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	p-value	Remarks
	B	Std. Error	Beta			
(Constant)	40.687	11.076		3.673	.000	
Student Participation	-1.986	3.352	-.060	-.593	.554	Not Significant
Paying Attention to Ideas	6.133	3.636	.191	1.687	.093	Not Significant
Collaboration	.208	4.576	.006	.045	.964	Not Significant
Learning	3.674	3.447	.113	1.066	.288	Not Significant
Asking Questions	-3.852	3.502	-.117	-1.100	.272	Not Significant
Observation	2.798	3.722	.093	.752	.453	Not Significant
Focusing on Problems	-6.886	3.262	-.224	-2.111	.036	Significant
R = 0.194;		R square = .038;		F = 1.351;		p = .227

Regression analysis is predicated on the existence of a relationship between the variables, so we do not move forward with it in the event that the result of the study show that there is no significant relationship between inquiry-based learning and science process skills. When two variables have no correlation that is, a correlation coefficient that is close to zero, it implies that changes in inquiry-based learning do not predict changes in the other variable which is science process skills. Correlation assesses the strength and direction of this linear link. Any regression model that tries to fit a line to data points that do not show any pattern is unproductive and deceptive without a

substantial association, and it will produce results that are not valid.

This can be supported by the Pal and Bharati (2019) which states that regression analysis comes after correlation. The basic correlation coefficient, which indicates the strength of a linear link between two variables, is the first idea to grasp. To determine whether there is a linear relationship between the two variables, a scatter plot should be created. The square of the simple correlation coefficient can be used to gauge how well the linear regression fits the data

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THE HISTORY OF HERITAGE MOSQUES IN BANDUNG CITY (CASE STUDY: GRAND MOSQUE OF BANDUNG)

Shirli Putri Asri^{1,2}

¹Lecturer Department of Architecture, Institut Teknologi Nasional Bandung

²Doctor of Architecture, Parahyangan Catholic University

ANNOTATION

The grand mosque of Bandung is one of the most important mosques in the city centre of Bandung. The grand mosque has a square park that plays a very important role for the community. The history of the grand mosque and the square park has undergone a transformation change so that the original building is no longer visible. This research aims to document the history of the development of the grand Bandung mosque with a qualitative research method with a descriptive approach and diachronic synchronic theory of historical tracing. Data collection techniques are divided into two, namely primary data and secondary data. Primary data is taken through observation techniques and interviews with mosque caretakers and traders who have long been selling at the mosque. Meanwhile, secondary data by searching for similar literature and studied in depth. Limitation of element research on the facade of the mosque, the shape of the roof of the mosque, the mosque square and the mosque ornament.

KEY WORDS: History, Heritage Mosque, Bandung Great Mosque

Аннотация: Masjid Agung Bandung merupakan salah satu masjid terpenting di pusat kota Bandung. Masjid Agung Bandung memiliki taman alun-alun yang sangat berperan penting untuk masyarakat. sejarah Masjid Agung Bandung dan taman alun-alun mengalami perubahan transformasi sehingga bangunan asli tak terlihat lagi. Penelitian ini bertujuan untuk mendokumentasikan sejarah perkembangan Masjid Agung Bandung dengan metode penelitian kualitatif dengan pendekatan deskriptif dan teori sinkronis diakronis penelusuran sejarah. Teknik Pengumpulan data terbagi menjadi dua yaitu data primer dan data sekunder. Data primer diambil melalui teknik observasi dan wawancara kepada para pengurus Masjid maupun pedagang yang sudah lama berjualan di Masjid tersebut. Sedangkan, data sekunder dengan pencairan literatur sejenis dan dikaji secara mendalam. Batasan penelitian pada fasad Masjid, bentuk atap Masjid, alun-alun Masjid dan ornamen Masjid. Batasan penelitian pada elemen fasad masjid, bentuk atap masjid, alun-alun masjid dan ornamen masjid.

Kata Kunci : Sejarah, Masjid Heritage, Masjid Agung Bandung

INTRODUCTION

The Bandung Great Mosque was founded in the 18th century precisely in 1811-1812 and became a heritage mosque in the city of Bandung (Nugraheni, 2017). Raden Wiranatkusuma II is the Regent of Bandung city who has the idea and establishment of the construction of Negerij Bandoeng, which was previously located in Kranyak (Parakanmuncang) moved to Cikapundung Bandung city.

The Bandung Great Mosque is strategically located in the centre of Bandung city and the Mosque park is the Bandung city square park. This mosque is also named as "Bandung Great Mosque of West Java Province" due to the tourism community not only comes from Bandung city, but many come from West Java province (Putra, 2015).

The Great Mosque of Bandung has undergone many changes in the form and facade of the building. Buildings that once had local characteristics are now invisible (Nasution, 2012). The Great Mosque of Bandung in the early days was characterised by the simple form of traditional houses of the local community with materials dominated by wood and a pattern following the traditional city, along with the policies of the colonisers at that time, namely the Dutch and the policies of the ruler of the Great Mosque of Bandung experienced a change in shape into a

modern one that reflected splendour. It no longer reflects the local identity of the land of Pasundan Parahyangan (Irhanto, 2001). Thus, the purpose of this research focuses on synchronic diachronic tracing of changes in the Great Mosque to its current condition as a heritage mosque phenomenon that has undergone significant changes in form.

LITERATURE REVIEW

Synchronic Diachronic in historical tracing

Synchronic in historical tracing means events that occur within a limited period of time. While diachronic is a historical trace that develops over time until now which is historical in nature. This research will document the two approaches above as a published historical archive for knowledge related to the history of heritage mosque architecture in the city of Bandung.

National historians state that the Bandung Great Mosque at the beginning of its construction had a simple traditional pangung building form, with wooden columns, "woven bamboo" walls, thatched roofs and large columns as a symbol of a place to wash or ablution. Historians claim that the Great Mosque of Bandung was built at the same time as the Pendopo building next to the mosque or south of the square, which was inaugurated on 25 September 1810. The Great Mosque, square, pendopo are traditional city elements in the Dutch East Indies as a symbol



of the religiosity of the government and society to the city's religious centre (Martokusumo, 2010).

The Mosque Park, namely the Bandung city square, is a testament to the legacy of the Mataram Kingdom. The statement expressed by Dr Nyai Kartika, a lecturer in the History Study Program at Padjajaran University in 2018. According to her in historical records, for more than fifty years the Parahyangan or Priangan area of the city of Bandung and part of West Java, was once under the rule of the Mataram kingdom. The trace evidence of its legacy is the Majid park as Bandung



Early Bandung Grand Mosque

In 1825 there was a fire at the Bandung Great Mosque which resulted in several construction structures being destroyed. In 1826 the Great Mosque of Bandung underwent repairs after a fairly large fire occurred. The Great Mosque which has wooden material construction almost throughout the building elements also underwent restoration. In 1850 there was a restoration or repair to improve the physical quality of the Mosque. The Bandung Great Mosque which originally used wood material underwent changes by changing the material to brick walls and the roof which originally used thatch was replaced with a tile roof based on the policy of the regent R.A. Wiranatakoesumah IV (1846-1874) (Aswati, 2013).

W. Spreat 1852 in a book entitled *De Zieke Reiziger* the splendour of the Bandung Great Mosque is written in the book. The splendour occurred after the repair of the Mosque, the magnificent Mosque was painted by the British painter W.Spreat in 1852. The painting of the Bandung Great Mosque depicts a large three-tiered Limas roof as a relic of the previous religion and the result of the relics of the previous Islamic kingdom and the surrounding community mentions the Sundanese term *Bale Nyuncung*. Then, the Great Mosque underwent improvements again in 1875 with changes in the addition of foundations and fences or walls surrounding the Mosque. Along with the times, the Bandung Great Mosque became increasingly crowded and became the centre of community activities in Bandung (Destiarmand, 2017).



Bandung Great Mosque in 1900

In the 19th century, precisely in 1900 the Bandung Great Mosque which turned into the Bandung Grand Mosque, West Java began to experience additions to the form of the facade and shape of the building, with the addition of the mihrab and pawestren elements (terraces on the left and right sides of the Mosque). In 1930 the construction of additional architectural elements of the Bandung Great Mosque began to be carried out again, the addition of towers on the left and right sides with the top of the tower having a precise shape resembling the roof of the Mosque as a function of the sound of adhan or reminder of prayer that is heard in almost all parts of the city of Bandung. According to historians, the form of the Bandung Great Mosque with the characteristic Nyuncung-shaped roof like this was the last time, before the massive change in the form of the Bandung Great Mosque became modern and lost its traditional (Budi, 2013).



The Great Mosque in 1955

In 1955 the Bandung Great Mosque underwent construction to a major overhaul ahead of the holding of the Asia-Africa conference, at the design of the first President of the Republic of Indonesia, Soekarna, the Bandung Great Mosque which previously had traditional characteristics seen from the nyuncung roof was converted into a dome roof in the style of Middle Eastern architecture or Arab countries. The minarets on the left and right sides of the mosque and also the pawestren were dismantled to become a large room. At that time the Bandung Great Mosque accommodated users from countries participating in the Asia-Africa conference. The onion dome on



the roof of the mosque designed by the first president of the Republic of Indonesia was destroyed by strong winds in 1967.

In 1973 the Great Mosque of Bandung underwent a rebuilding on the basis of a decree of the governor of West Java at that time. The Bandung Great Mosque was made into two floors or terraced and expanded to accommodate the increasing number of users or worshippers. The mosque which previously did not have a basement was made a basement as a place for ablution and the ground floor as a worship space.

In 2001, precisely on 25 February 2001, the first stone was laid in the Bandung Great Mosque construction project, until it was inaugurated on 4 June 2003 by the Governor of West Java, H.R. Nuriana. At that time the construction was more in the garden area of the Mosque, namely the Bandung city square and along with the inauguration changed the name of the Mosque to the Bandung Grand Mosque of West Java as a Provincial level Mosque in West Java.

The architecture of the Mosque which now feels the splendour of the Mosque Tower and Dome is the work of national architects namely Ir. H. Keulman, Ir.H. Arie Atmadibrata, Ir.H. Nu'man and Prof. Dr. Slamet Wirasonjaya. To reduce the structural load, the roof construction uses a "Space Frame" which is then closed with a metal material cover.



Bandung Grand Mosque at the moment

The Bandung Great Mosque that we see today has two twin minarets on the left and right sides as high as eight and a half metres, this mosque is always open to the public and can be used as a tourist destination. The Bandung Great Mosque has a land area of 23,448 m² with a building area of 8,575 m² which can accommodate 13,000 worshippers.

METHODOLOGY

A descriptive qualitative analysis method (Creswell, 2008) with a synchronic and diachronic approach was used in the research to understand phenomena or events in the context of a particular time (synchronic) and also over a span of time (diachronic). Here are the general steps that can be followed:

1. Identify the Research Theme: Decide on a research theme or topic that you want to examine synchronically and diachronically. For example, you may want to examine the evolution of architectural patterns of rural houses in one region over time..

2. Data Collection: Collect relevant data for your research. This can include images, historical records, interviews with locals, archival documents, and other sources that can provide insights into the architecture of a country house in the context of time.
3. Synchronic Analysis: Using a synchronic approach, the analysis focuses on the architectural picture of a country house at one specific point in time. Identify the characteristics, patterns, and trends that emerged in the design and structure of the house in your chosen time period.
4. Diachronic Analysis: Using a diachronic approach, analyses focus on changes and developments in rural house architecture over time. Compare data from different time periods to identify design evolution, cultural influences, technology, or other factors that influenced the changes.
5. Interpretation and Conclusion: After conducting the synchronic and diachronic analyses, interpret your findings. Discuss how changes in country house architecture reflect changes in society, culture or the environment through time. Draw conclusions about your findings and suggestions for future research or action.
6. Presentation and Publication: Present your research results in a clear and compelling manner through a research report, presentation, or scientific publication. Share your findings with the scientific community and the public who may be interested in the topic you are researching.

In Data Collection

Data collection is divided into two parts:

1. Primary Data Collection

Primary data is obtained from direct observation by conducting interviews with historians of the city of Bandung, the management of the Bandung Great Mosque and merchants who have long been selling in the Bandung Great Mosque trading area.

2. Secondary Data Collection

Secondary data is obtained from the results of literature searches of similar journal publications, books related to the history of the city of Bandung, books related to the history of the Bandung Great Mosque which are critically analysed and draw conclusions according to the diachronic synchronic approach.

DISCUSSION

The Great Mosque of Bandung underwent changes up to eight times. Changes in the shape and facade of the Bandung Great Mosque after conducting this research were seen as coming from the policies of the ruler or leader in that era. Government policies in the interests of the time such as the holding of the Asia-Africa conference and seeing the phenomena of rapid population growth so that the capacity and needs of the Bandung Great Mosque also changed and increased its function and area.

In 1812-1875 the Bandung Great Mosque which paid attention to social factors so that it had a traditional local architectural style. Undergoing changes into a mosque with brick material



with aspects of comfort and strength to protect worshipers or the people who use it.

In 1900 the Bandung Great Mosque represented more in the addition of facilities, such as the addition of pawestran (terraces on the left and right sides), mihrab, drum, water pool, but at that time the minaret had not been added.

In 1955 along with the Asian-African conference, made a very big change to the Mosque with the demolition to expand the worship area to accommodate worshipers or users who came from the Asian-African conference participants.

In 1967 Masjid Agung Bandung added. Facilities such as religious education facilities, polyclinic areas and community activity centres, so that the Mosque is increasingly visited.

In 2001 the Mosque built twin minarets that function as important building markers as the centre of community activity not only for diversity, calling to prayer, but to commercial interests, telecommunications to become a tourist destination with the grandeur of the Mosque. So that the economic activities of the community can run well in the Mosque area or the city centre of Bandung, namely the Bandung city square as a mosque park area.

CONCLUSION

The history of the transformation of the Bandung Great Mosque into the Bandung Grand Mosque, West Java, is inseparable from the important role of the government as the leader at that time, namely the Dutch East Indies and Indonesia as policy controllers and the Mosque architects themselves (Soejarno and MacLaine Pont) as the main actors in the design of the Mosque. The Bandung Great Mosque, which was originally a traditional style of the local community and a relic of the Mataram kingdom, was converted into a modern architectural style mosque with a touch of Middle Eastern style architecture. This was done with the aim of interests in his era such as important event activities and accommodating users or worshipers with a large enough capacity.

The history of changes in the face and facade of the Bandung Great Mosque is a documentation of changes from time to time that occurred at the Bandung Great Mosque. Changes to the Bandung Great Mosque not only change the face of the Mosque but also the identity of the face of the city of Bandung and the concept of the Bandung city order space at that time until now. Changing its traditional face into a modern one that also changes the face of the city of Bandung which was once characterised by the traditional Parahyangan Priangan to become more modern as the capital of the West Java province.

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ASSESSMENT OF FINANCING ADULT AND NON-FORMAL EDUCATION PROGRAMS IN GOMBE STATE

Abbas Mahmud Ph. D¹, Kasim Mohammed Saad²

¹Department of Adult Education and Extension Services, Faculty of Education and Extension Services,
Usmanu Danfodiyo University, Sokoto

²Department of Educational Foundation, Faculty of Education and Extension Services, Usmanu Danfodiyo University,
Sokoto

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ABSTRACT

This study assessed the financing of Adult and Non-Formal Education (ANFE) programs in Gombe state. Three specific objectives and three research questions were formulated. Descriptive survey design was adopted and population of the study was 325 respondents which comprise 15 administrators and 310 instructors drawn from the 15 government own Adult Education Centers in Gombe state. A sample of 169 respondents was used for the study. That is 15 administrators and 154 instructors. Instrument used was a structured questionnaire with a four rating scale titled "Assessment of Financing Adult and Non-Formal Education Questionnaire (AFANFEQ)". It was validated by two experts in the Department of Educational Foundation, Faculty of Education, Gombe State University. Pilot study was carried out and Cronbach's Alpha was used to compute the reliability coefficient of 0.97. Descriptive statistics (mean and standard deviation) was used to answer the research questions. The findings of the study revealed that Government, Philanthropists, Community members, Adult learners and NGOs such as UNESCO, World Bank and UNDP contribute in the funding of ANFE in Gombe State but over dependence on external donors, lack of political will, inefficient resource management, embezzlement by government officials and inadequate policy support affected and serve as barriers to efficient financing of ANFE in Gombe state. It was therefore recommended among others that there is need to advocate for stronger political commitment to ANFE in Gombe state. This can be achieved through lobbying, raising public awareness, forming alliances with influential stakeholders, and demonstrating the socio-economic benefits of investing in lifelong learning opportunities.

KEY WORDS: Financing, Adult and Non-Formal Education Programs

INTRODUCTION

The foundation of both individual and societal growth is education. The formation of a person's personality is greatly influenced by their education. Nigeria has launched educational initiatives over the years to combat illiteracy, which is one of the main obstacles to human progress, especially for adults. One of these educational initiatives is the establishment of Adult and Non-Formal Education (ANFE), which aims to provide information and skills for improved societal adaptability to adults, children, and young people who did not have the opportunity to receive formal education in the past. Adult and non-formal education (ANFE) plays a crucial role in improving literacy rates, enhancing employability, and fostering socio-economic development, particularly in developing regions. In Nigeria, and specifically in Gombe State, the effective financing of ANFE programs is vital for addressing educational disparities and promoting inclusive education. ANFE programs are designed to provide flexible and accessible learning opportunities for adults and marginalized groups who missed out on formal education. According to Mba (2014) the Federal Government decided to include adults in the Universal Basic Education (UBE) Program because it recognized that adults make up the majority of the labor

force and that their ability to contribute to the nation's development was limited by their level of education.

Adult and Non-Formal Education Programs refers to education for adults who are older than the typical school age. Olaye and Onajite (2015) defines adult education as any formal, informal, or non-formal educational activity intended for adults to help them gain the information and skills necessary for self-sustenance. The programs help reduce illiteracy by providing basic education to adults, enabling them to read, write, and perform basic arithmetic. These programs offer vocational training and skill acquisition, enhancing employability and self-sufficiency among participants, it promotes social inclusion by providing educational opportunities to disadvantaged groups, including women, rural residents, and the unemployed. Therefore skills gained through ANFE can lead to better job opportunities and economic empowerment for individuals and their families. According to Ani (2010) financing adult and non-formal education involves funding programs and initiatives that cater to adults and learners outside the traditional formal education system. This can include vocational training, continuing education, adult literacy programs, and skill development courses. The goal of adult education is to assist individuals in transitioning from whatever



level of consciousness they are now operating at to a critical consciousness where they are able to critically analyze their surroundings and develop the ability to positively alter their lives for the good of society. Conversely, non-formal education is described as any planned and organized education activity or training outside the framework of the formal school system (Obiozor & Madu, 2014). In order to raise their consciousness and improve their level of living, it is designed to fulfill the requirements of certain groups, such as dropouts, illiterate men and women, farmers, children and youth, workers, or other marginalized groups. As a result, Adult and Non-Formal Education is an ongoing educational process that aims to provide students with a broad range of experiences in and out of the classroom in all areas of life.

Furthermore, the FGN recognized the value of Adult and Non-Formal Education in Nigeria and set forth the following goals in the National Policy on Education; providing functional literacy and continuing education to adults and young people; providing functional and remedial education to dropouts; providing further education for various categories of formal school graduates; providing in-service, on-the-job, vocational, and professional training for various worker categories; and providing the essential civic, cultural, and aesthetic education for public enlightenment. However, sufficient fund for the various federation states efficient execution is a prerequisite for the achievement of the aforementioned goals. Onwuadi (2012) noted that the government's lack of funding for Adult and Non-Formal Education programs continues to be the biggest discouragement, and as a result, the education provided by ANFE is extremely subpar and of second-class quality. In the same vein, Hanachor and Needom (2014) stated that insufficient funds to run Adult and Non-Formal Education programs in Nigeria seem to be the most hindrance to the promotion of the sector. Onwuadi (2012) observed that insufficient funds by the government remain the most outstanding disincentive in Adult and Non-Formal Education programs and due to lack of funding the education offered in Adult and Non-Formal Education represents very poor and second-class education. Nke, Abua and Eneh (2018) further noted that one other difficulty is that both government and non-governmental organizations are usually reluctant to reveal information on their finances. The consequences of this problem are that there may be lack of researched information on the economic and financing of adult education and related activities. To support this further, Abu and Fabumni (2006) claimed that money from the government and NGOS is a major factor in the effective development and implementation of Adult and Non-Formal Education programs. According to Gbadamosi, Onuoha, and Nwosu (2013) lack of knowledge and clear vision for adult non-formal education (ANFE) as a strategy goal and instrument for national development has resulted in many government-sponsored programs for adult education. Similarly, Jaiyeoba (2007) argued that the entire aim of the funds being pumped into Adult and Non-Formal Education may be negated if a large portion of the funds are not adequately accounted for. Accountability and appropriate handling of these funds are

therefore essential to the success of Adult and Non-Formal Education programs.

Literature search has revealed that, a number of studies have been carried out on the various aspects in the financing of Adult and Non-Formal Education programmes. Catherine, Johnson and Kennedy (2020) carried out a research on repositioning the funding of adult and non-formal education in Anambra State, Nigeria. The findings indicated that Adult and Non-Formal Education are funded to a low extent in the State. The study also revealed that some of the challenges confronting Adult and Non-Formal Education include: difficulties in identifying budget meant for Adult and Non-Formal Education, lack of information on funding by individuals, inadequate funding by the government, among others. The study further showed that the strategies to be adopted in repositioning the funding of Adult and Non-Formal Education are: distinct budget allocation by federal and state government for Adult and Non-Formal Education, effective utilization of fund accruing to Adult and Non-Formal Education, assisting of Adult and Non-Formal Education through regular funding by international bodies and NGOs, among others. Ugomma and Ngozi (2009) conducted a study on Financing Adult and Non-Formal Education in Anambra State. The finding revealed that: government were not funding adult and non-formal education adequately in the state; funds for adult and non-formal education was obtained mainly from non-governmental organizations. There was no political will on the part of government to fund adult and non-formal education and some problems were confronting financing adult and non-formal education in Nigeria. Hassan (2009) carried out a study on financing adult and non-formal education programmes in Nigeria. The findings showed that governments were not funding adult and non-formal education adequately in Nigeria; funds for adult and non-formal education was obtained from other sources; adult literacy, distance, labour and prison education received fund from government; there was a political will on the part of government to fund adult and non-formal education in Nigeria; and some problems were confronting financing of adult and non-formal education in Nigeria.

The above reviewed works have a relationship with the present study as they all focused on various aspect of financing of adult and non-formal education programmes; however, they also differed significantly from the present study in content, geographical scope, and methodology. Hence, the present study is aimed at assessing the financing of adult and non-formal education programme in Gombe state, Nigeria.

STATEMENT OF THE PROBLEM

Ideally, adequate finance is expected to promote effective adult and non-formal education programme in Nigeria. The main aim or goal of adult and non-formal education is to provide functional basic education for adults and youths who have never had the advantage of formal education or who left school too early such as migrant folks, almajiri pupils, illiterate and semi-illiterate adults, youths, and adolescents. It is the expectation of the



government, parents and even society that quality of adult and non-formal education is received by adult learners in Nigeria through the provision of adequate fund. However, Nigeria faces significant challenges in providing adequate funding for adult and non-formal education programs. These programs are crucial for addressing literacy gaps, vocational skills development, and lifelong learning opportunities for its diverse population. Equally, observations have shown that there seems to be shortage in the financing of adult and non-formal education in Gombe state. This can be seen in the areas of limited government budget allocation, inadequate infrastructure and resources, low private sector participation, limited community engagement, inefficient financial management, socioeconomic disparities and lack of sustainable funding models. Thus, assessing the financing of ANFE in Gombe State is crucial for understanding the current funding mechanisms, identifying gaps, and proposing solutions for sustainable funding models

OBJECTIVES OF THE STUDY

The main purpose of the study was to assess the financing of Adult and Non-Formal Education program in Gombe state, Nigeria. Specifically, the objectives were to:

1. Assess the extent Adult and Non-Formal Education is funded in Gombe state
2. Assess the challenges and barriers to efficient financing of Adult and Non-Formal Education in Gombe state
3. Assess the strategies for improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state

RESEARCH QUESTIONS

The following research questions guided the study:

1. To what extent does Adult and Non-Formal Education is funded in Gombe state?
2. What are the challenges and barriers to efficient financing of Adult and Non-Formal Education in Gombe state?
3. What are the strategies for improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state?

RESULTS

Research Question One: To what extent does Adult and Non-Formal Education is funded in Gombe state?

Table 1: Mean Scores and Standard Deviation of Respondent’s Opinions on on the Extent of Funding Adult and Non-Formal Education in Gombe state.

S/N	Item statement	Respondents	Respondents’ Opinions				Mean	SD
			VGE %	GE %	LE%	VL E%		
1.	Government provides adequate funding of Adult and Non-Formal Education in Gombe State.	Administrators	100	0.00	0.0	0.0	4.00	.000
		Instructors	98.1	0.4	1.5	0.4	3.95	.373
2.	Philanthropists assist in the funding of Adult and Non-Formal Education in Gombe State.	Administrators	100	0.0	00	00	4.00	.000
		Instructors	92.7	3.8	3.1	0.4	3.85	.559

METHODOLOGY

Descriptive survey design was adopted for the study and the population of the study is 325 which comprises 15 Administrators and 310 Instructors drawn from the 15 government own Adult Education Centers in Gombe State. A sample of 169 respondents was used for the study. That is, 15 Administrators and 154 Instructors. The selection of this sample size is based on the recommendation of Research Advisors, (2006). Who recommended that in a population of between 300 and 400, the sample size of 169 is enough for good representation. The entire 15 Administrator were used for the study. 154 Instructors were selected using proportionate random sampling.

Instrumentation

A structured questionnaire titled “Assessment of Financing Adult and Non-Formal Education Questionnaire” (AFANFEQ) with a four rating scale (VGE = 4, GE = 3, LE = 2 and VLE = 1) was used for research question one while the response mode of Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1 was used for research questions two and three.

Validity and Reliability of the Instrument

The instrument was validated by professionals in the Department of Educational Foundation, Faculty of Education Gombe State University. Pilot study was carried out with thirty 30 Instructors and 5 Administrators. The data from the pilot study were analyzed using split halve method of reliability and Cronbach’s Alpha was used to compute the reliability coefficient where 0.97 reliability coefficient was obtained.

Procedure for Data Collection and Analysis

The instrument was personally administered on the respondents by the researchers which facilitated prompt response from the respondents. Descriptive statistics (mean score and standard deviation) was used to answer the research questions. In answering research questions, any item that score 2.5 and above will be considered agreed and less than 2.5 will be considered disagreed. Some acronyms used in the study are: VGE – Very Great Extent, GE – Great extent, LE – Low Extent, VLE – Very Low Extent, F –Frequency, % - Percentage and SD – Standard Deviation



3.	Adult and Non-Formal Education Centers generate internal revenue for the development of the programme	Administrators	100	0.0	0.0	0.0	4.00	.000
		Instructors	88.5	8.4	2.7	0.8	3.82	.596
4.	NGOs such as UNESCO, World Bank, UNDP fund Adult and Non-Formal Education programs in Gombe State.	Administrators	76.5	00	17.6	0.0	3.41	1.176
		Instructors	77.1	8.8	13.7	0.0	3.48	1.060
5.	Adult learners contribute money for funding of the program.	Administrators	52.9	0.0	41.2	0.0	3.12	1.265
		Instructors	65.6	10.7	22.1	0.4	3.17	1.287
Cluster mean		Administrators				3.706	.4882	
		Instructors				3.658	.7750	

Table 1 shows the analysis of items statements 1-5 used to answer the research question one on the extent of funding Adult and Non-Formal Education programme in Gombe state. The table revealed that to a great extent, Government provides adequate funding of Adult and Non-Formal Education in Gombe State with a mean score of 4.00 and standard deviation of .000 for administrators and a mean score of 3.85 with standard deviation of .559 for instructors. Also, items 2,3,4 and 5 with mean ratings of 4.00, 4.00, 3.41 and 3.12 with standard deviations of .000, .000, 1.176 and 1.287 respectively for administrators and mean score of 3.95, 3.82, 3.48 and 3.17 with standard deviations of .559, .596, 1.060 and 1.287 respectively for instructors. This shows that to a greater extent; Philanthropists assist in the funding of Adult and Non-

Formal Education in Gombe State, Adult and Non-Formal Education Centers generate internal revenue for the development of the programme, NGOs such as UNESCO, World Bank, UNDP fund Adult and Non-Formal Education programs in Gombe State and Adult learners also contribute money for funding of the program. The cluster mean of 3.706 with a standard deviation of .8442 for administrators and the mean of 3.658 with standard deviation of .7750 for instructors. This indicated that the government, philanthropists, Adult and Non-Formal Education Centers, NGOs and even adult learners contribute to a greater extent in financing Adult and Non-Formal Education programme in Gombe state.

Research Question Two: What are the challenges and barriers to efficient financing of Adult and Non-Formal Education in Gombe state?

Table 2: Mean Scores and Standard Deviation of Respondent's Opinions on the Challenges and Barriers to Efficient Financing of Adult and Non-Formal Education in Gombe State.

S/N	Item statement	Respondents	Respondents' Opinions				Mean	SD
			SA%	A%	D%	SD %		
6.	Over dependence on external donors is a challenge to funding of Adult and Non-Formal Education programme	Administrators	72.3	27.7	0.00	0.00	3.87	0.181
		Instructors	57.9	2.00	29.0	11.1	3.86	0.216
7.	Lack of political will to fund ANFE is a constraint to funding of Adult and Non-Formal Education programme.	Administrators	72.4	27.6	0.00	0.00	3.76	0.970
		Instructors	61.0	23.8	11.0	4.20	3.48	0.518
8.	Inefficient resource management may be constrains in the funding Adult and Non-Formal Education in Gombe state	Administrators	84.1	15.9	0.00	0.00	3.29	0.312
		Instructors	65.1	17.4	17.0	6.50	3.68	0.850
9.	Embezzlement by government officials is another constraint to funding Adult and Non-Formal Education.	Administrators	82.4	17.6	0.00	0.00	3.57	0.179
		Instructors	67.9	5.90	19.0	7.30	3.68	0.865
10.	Inadequate policy support is a challenge to financing of Adult and Non-Formal Education programme.	Administrators	74.1	5.00	16.0	4.90	3.54	0.951
		Instructors	73.1	0.00	20.0	6.90	3.43	0.943

Table 2 shows the analysis of item statements 1-10 used to answer the research question two on the challenges and barriers to efficient financing of Adult and Non-Formal Education in Gombe state. The table revealed that, both the instructors and administrator agreed to the statement that over dependence on

external donors, lack of political will, inefficient resource management, embezzlement by government officials and inadequate policy support are the challenges and barriers to efficient financing of Adult and Non-Formal Education in Gombe state. As presented on the table, all the items were agreed by both



the administrators and instructors, and item number 1 attracted the highest mean score of 3.87 for the administrator and 3.86 instructors, with details showing 84.1% of administrators agreed with the item. For the instructors, 65.1% agreed with the item. The standard deviation recorded for the item statements was 0.181 and 0.216 respectively. All the items have the mean score

of 3.00 and above indicating that the constraint to efficient financing of Adult and Non-Formal Education Programs in Gombe State are over dependence on external donors, lack of political will, inefficient resource management, embezzlement by government officials and inadequate policy support.

Research Question Three: What are the strategies for improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state?

Table 3: Mean Scores and Standard Deviation of Respondent’s Opinions on the Strategies for Improving the Financial Sustainability of Adult and Non-Formal Education programs in Gombe State.

S/N	Item statement	Respondents	Respondents’ Opinions				Mean	SD
			SA%	A%	D%	SD %		
11.	Adequate allocation of budget by the federal and State government may serve as strategies for improving the financial sustainability of Adult and Non-Formal Education	Administrators	72.3	27.7	0.00	0.00	3.47	0.181
		Instructors	57.9	2.00	29.0	11.1	3.26	0.216
12.	Assisting of ANFE through regular funding by international bodies may assist in in repositioning the funding of Adult and Non-Formal Education.	Administrators	72.4	27.6	0.00	0.00	3.76	0.970
		Instructors	61.0	23.8	11.0	4.20	3.88	0.518
13.	Improving in the funding of ANFE in the state by NGOs may help in repositioning the funding of Adult and Non-Formal Education	Administrators	84.1	15.9	0.00	0.00	3.29	0.312
		Instructors	65.1	17.4	17.0	6.50	3.68	0.850
14.	Stakeholders in education, institutions and private sectors should assist in the funding of ANFE.	Administrators	82.4	17.6	0.00	0.00	3.57	0.179
		Instructors	67.9	5.90	19.0	7.30	3.68	0.865
15.	Internally generated revenue should be adopted by different centers of ANFE	Administrators	74.1	5.00	16.0	4.90	3.54	0.951
		Instructors	73.1	0.00	20.0	6.90	3.43	0.943

Table 3 shows the analysis of item statements 11-15 used to answer the research question three on the strategies for improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state. The table revealed that, both the instructors and administrators agreed to the statement that adequate allocation of budget by the federal and State government, assisting of ANFE through regular funding by international bodies, improving in the funding of ANFE in the state by NGOs, proper monitoring of the fund released for ANFE in the state and creation of internally generated revenue by different centers of ANFE are the strategies for improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state. As presented on the table, all the items were agreed by both the administrators and instructors, and item number 2 attracted the highest mean score of 3.76 for the administrators and 3.88 instructors, with details showing 72.4% of administrators agreed with the item. For the instructors, 84.8% agreed with the item. The standard deviation recorded for the item statements was .970 and .518 respectively. All the items have the mean score of 3.00 and above indicating that the strategies to be adopted for improving the financial sustainability of Adult and

Non-Formal Education programs in Gombe state are; adequate allocation of budget by the federal and State government, assisting of ANFE through regular funding by international bodies, improving in the funding of ANFE in the state by NGOs, proper monitoring of the fund released for ANFE in the state and creation of internally generated revenue by different centers of ANFE.

DISCUSSION OF MAJOR FINDINGS

The first finding of this study revealed that Government provides adequate funding of ANFE and NGOs such as UNESCO, World Bank, UNDP also assist in funding ANFE. The findings also revealed that Philanthropists, Community members and Adult learners contribute money for funding of the programs in Gombe state. This finding was presented on table 1 by answers to research question 1 where both administrators and instructors all agreed to that. The finding is in line with the views of Ray-offor and Onyezere (2013) who stated that international aid plays a crucial role in addressing the funding gaps and supporting the development of effective adult and non-formal education programs, particularly in low-income and resource-constrained



settings. The agencies, such as UNESCO, UNICEF, the World Bank, and bilateral aid organizations, allocate funds specifically for adult and non-formal education programs in developing countries that can cover a wide range of expenses, including teacher training, curriculum development, infrastructure improvement, and educational materials. This is also in line with the view of Omolewa (2015) who asserted that Aid organizations often provide technical assistance and capacity-building support to strengthen the institutions and systems involved in delivering adult education. This may include training for educators, developing monitoring and evaluation frameworks, and enhancing governance structures.

The second findings of the study showed that over dependence on external donors, lack of political will, inefficient resource management, embezzlement by government officials and inadequate policy support are the challenges and barriers to efficient financing of Adult and Non-Formal Education in Gombe state. This is in line with the view of Okon (2016) who stated that overdependence on external donors can create several challenges for financing adult and non-formal education because external donor funding is often subject to changes based on the donor's priorities, economic conditions, and political climates. This can lead to unpredictable and unstable financial support for adult and non-formal education programs and may hinder the development of sustainable, locally-funded initiatives. The findings is also in line with the view of Kuratko (2015) who posited that when political leaders do not prioritize adult and non-formal education, these programs often receive minimal or no funding in national and local budgets. This leads to chronic underfunding and inadequate resources to run effective programs. He equally asserted that without political commitment, there is a lack of robust policies and strategic plans to support adult and non-formal education which results in fragmented efforts, unclear objectives, and poor implementation of programs.

The last findings of the study revealed that adequate allocation of budget by the federal and state government, assisting of ANFE through regular funding by international bodies, improving in the funding of ANFE in the state by NGOs, proper monitoring of the fund released for ANFE in the state and creation of internally generated revenue by different centers of ANFE are the strategies for improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state. This finding is in line with the view of Dave (2016) who stated that aid organizations collaborate with governments, NGOs, civil society organizations, and private sector partners to leverage resources and expertise for adult education initiatives. These partnerships enhance the impact and sustainability of funding efforts. He further asserted that aside from government funding, there are several alternative sources of funding for adult and non-formal education programs; philanthropic foundations, such as the Bill & Melinda Gates Foundation, Ford Foundation, and Open Society Foundations, often provide grants and support for adult education initiatives that focus on social development, education, and empowerment. The findings is also in line with the view of Udo

(2012) who posited that internally generated revenue (IGR) can significantly enhance the financial sustainability of adult and non-formal education programs by diversification of funding sources which reduces dependency through generating their own revenue without necessary dependence on external funding sources such as government grants and donor contributions, which are often unpredictable and unstable.

CONCLUSION

Assessing the financing of adult and non-formal education programs in Gombe State reveals several critical insights. Firstly, these programs are vital for improving literacy rates, skill acquisition, and overall socio-economic development. However, the financing of these programs faces significant challenges. Funding levels are often inadequate, inconsistent, and heavily reliant on governmental allocations which are subject to political and economic fluctuations. To enhance the effectiveness and sustainability of adult and non-formal education programs, there is a need for diversified funding sources. This includes increased government funding, partnerships with non-governmental organizations, international donors, and the private sector. Furthermore, integrating these programs into broader educational policies and development strategies can enhance their impact. Community involvement and awareness campaigns are crucial in garnering support and participation. While Gombe State has made strides in promoting adult and non-formal education programs, a comprehensive and multi-faceted approach to financing is essential for these programs to thrive and significantly contribute to the state's development goals.

Recommendations

Based on the findings of this study, the researchers recommend the following:

1. There is need to advocate for stronger political commitment to adult and non-formal education. This can be achieved through lobbying, raising public awareness, forming alliances with influential stakeholders, and demonstrating the socio-economic benefits of investing in lifelong learning opportunities.
2. There is need for proper monitoring of the fund released for ANFE and creation of internally generated revenue by different centers of ANFE. This will help in improving the financial sustainability of Adult and Non-Formal Education programs in Gombe state.
3. There is need for implementing transparent financial management practices and accountability measures. This can ensure that allocated funds are used efficiently.

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CULTURE, GENDER, LANGUAGE AND LITERATURE: A PARALLEL OBSERVATION IN THE INDIAN LITERATURE AND BRITISH

Dr. SK. Saleem Babu¹, Dr. Narendra Babu Dasari²

¹Mentor in English, RGUKT, Nuzvid

²Office Superintendent, Income Tax Department, Hyderabad

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ABSTRACT

In this paper, culture gender, language and literature is presented in the socio-linguistic point of view and analyzed in the complex relationship with gender perspective. Whether knowingly or unknowingly the gender aspects may enter into literature or culture and passed from one generation to another and be stabilized as identities. These identities may corrupt the minds of people especially children. When they learn things in their tender ages, they unknowingly learn gender differentiation. This gender discrimination is imprinted in their minds perpetually. Society should take care in establishing future generations with utmost care. When the perspective is failed the gender discrimination unknowingly will continue for generations.

KEYWORDS: Language, Culture, Gender, Discrimination, and Socio-Linguistics

The relationship between culture and language is always fascinating and continues to be fascinating as it shows the evolution of culture. One must observe the culture in order to find out the curious aspects of language. In this paper I mention culture as a synonym of acquired knowledge of society, functional aspect of society, a member of a broad group and categorizing the world around us. The high culture of society delineates the appreciation of language and literature. The coastal people of India express various names to express the coast. The rice rich states cherish various nouns to express paddy. English people have various expressions for snow where no such type of words can be found in the lexicon of Equatorial regions. Different people speak differently, as they think different and their experiences in life are different.

Socio-linguists will observe language in the perspective of biological models. 'She' and 'her' are indicative of females. 'He' and 'His' are for masculinity. 'It' and 'its' are for neuter. In English agreement with subject is based on noun but not with gender, whereas in Indian languages it is based on gender. The inflections end particularly with gender. For the task performed (Feminine Gender in Telugu: Ame thana pani chesindi), (Masculine: Athanu thana pani chesadu). This type of variations can be observed in English language also like a person can be addressed as 'Mr' for unmarried and married senses, whereas in the case of women, the same address changes as "Mrs" for married and 'Miss' for unmarried. Recently the discrimination is

changed as 'Ms' for both married and unmarried woman. In mythology, women are depicted as devoid of any heroic proportions, either malicious or innocent for instance in Hebrew Bible, Greek Philosophical writings and in Indian Puranas; children's writings like Alice in Wonderland, and The Sleeping Beauty, etc., The female is referred as Second Sex, as the other man, or no-man, as it is imagined that 'she' lacks the male power and character. Thus, female is the negative binary of male. In such acculturation and conditioning, the brain of women is innately modified and the patriarchal ideology prevailed in the society. Male is depicted as active in society as well as in writing and shown adventurous, dominant and rationale whereas women are described in the negative portrait or quite opposite to these features like passive, egoist, timid, conventional, and emotional. Throughout history, women were denied objective status; she is shown as 'others'. In the words of Simon De Be Beauvoir's existentialist terms, "*Patriarchal ideology presents women as immanence, men as transcendence. Women internalize this vision and live in a state of inauthentic identity. To quote Beauvoir, —One is not born a woman; rather, one becomes a woman*" (quoted. in Barry 130).

Many words in English language are directly derived out of male words like and many male words are not equal to female words like a mistress is not equal to master, governess is not equal to governor. Until recent times career is reserved for men only for women career is added before them if they pursue. Again society



talks about unmarried women but not about unmarried men. Recently many male dominated words are phased out of lexical world like police-men, and fire-fighters etc. The militia includes men and women but sisterhood does not include males. Many times unpleasant aspects are associated with women like Black-widow spider, Venus fly trap. This aspect made girl child consciously or unconsciously to accept masculine superiority and condition their mind to consider as inferior. This bad consciousness is the primary foundation stone for a male ruling. According to French feminists, this Andro-centric view influenced language. French feminists opined that male chauvinism made language as Phallogocentric. Lacan, in terms of Freud's theory of psyche and gender and, applies it to the dimension of language. According to psychoanalytical theories, the child is born as a sexless, neutral dimension. It does not realize its sex. The oedipal stage is important in Lacan's theory, as the male identifies himself with his/her father and girls with her mother as the family representative of the culture. The language that is promoted by its culture reflects the binary aspect like father/mother, masculine/feminine, active/passive, sun/moon, head/heart, intelligent/sensitive, emotional/reason, etc., The dominant features are attributed to masculine and sensitive features are attributed to feminine. Therefore, French feminists culminate language as Phallogocentric and the values attributed to language are also masculine in nature.

The use of written language is shaped and socialized into behavioural aspects through culture. The use of appropriate expressions, the social attitudes, beliefs, and values in the literature conveys the aspects of past, present and to some extent future aspects. In the Sanskrit dramas the higher caste people used Sanskrit, the lower castes and women use the language of Prakrit. In many prominent epics, women are described as sensuous, malice and epicure. Women are depicted as figurative. In the eyes of gender, the male populace always dominates females by quoting the unknown figures in the history. For ex: in a patriarchal society like India, always people utter the names of Sita, Savitri, and Ahalya to subdue their identity and feelings. The name becomes watchwords in popular language. Many elders also try to subvert the ideal aspects in the myths of India in a wrong manner. Subduing to the aspirations of male women is put under subordinate position. In many Indian epics the true meaning was always hidden and interpreted according to the whims and fancy of the male chauvinism. R.K. Narayanan touched the bottoms of the society in his writings. He echoed the voice of women in his 'The Dark Room' and the problems of women in their lives. Bunch of women writers added another dimension to

Indian Writing in English, They explored the area of female subjectivity in male patriarchal society. Ruth Praver Jhabvala is the foremost among female novelists. She used comedy of manners of westerners in her novels and also she used Bildungsroman i.e. literary genre that focuses on the psychological and moral growth of the protagonist from youth to

adulthood i.e. shift of character. 'Esmond in India', 'The Householder', 'Get Ready for Battle,' 'Head and Dust' are her famous novels. The House Holder was filed my Merchant D Ivory under the screenplay of Ruth Praver Jhabvala.

Kamala Markandaya's 'Nectar in Sieve' and 'Some Inner Fury' is known for culture clash between Indian urban and rural societies. Rukmani in 'The Nectar in Sieve' represents the attitude of middle class women. Even though her situation worsens every time, she endures it with patience and hopes things will be better soon. Her other novels include 'Some Inner Fury', 'A Silence of Desire', 'Two Virgins', and 'Pleasure City.' Nayantara Sahgal's 'A Time to Be Happy', 'This Time of Morning', 'Storm in Chandigarh', 'The Day in Shadow', 'A Situation in New Delhi', 'Rich Like Us', and 'Plans for Departure' deals with the politics, and economic issues during the reign of Nehru and the crisis after his death.

William Butler deals with rapid industrialization and problems in Victorian Era in his works. Butler in his 'Leda and Swan' depicts the incident of Rape of Leda by Zeus and in consequence the birth of Helen, who causes the destruction for Trojans. This story proves that rape, abuse and power may cause the destruction of society. The same was also mentioned in the epic Mahabharatha through the character of Draupadi.

Another prominent Oscar Wilde, who heralded the Aesthetic Movement and supported the idea 'Art for Art's sake', depicted good verses bad, gender differences, German legend of Faust and Freudian trilogy 'id', 'ego' and 'superego.' 'In the Fisherman and his Soul', Oscar Wilde personified various types of women in his writings. The Mermaid is innocent, blonde, whereas the Witch is red haired, insincere and evil. The influence of the First World War, the concepts like racism, feminism, power, money mother and son relationship came into emergence. D.H. Lawrence, in his 'The Rocking Horse Winner' depicted a character called Hester an evil woman that ever can be described in the literature. Regarding Greek and Roman mythology are highly sexist. Abusive characters like Zeus and jealous characters like Hera are personified. Men are supposed to exploit women and their subordination where as women are born to undergo torments. Sky, heaven, and God are masculine whereas Earth is personified as woman. In many mythologies also women are personified as seductive, causing disturbance and immoral. Studies reveal that gendered language indicate derogatory with no pejorative implications but gradually gain them in society. Literature, language and society should carefully choose the words which may indicate the discriminating attitudes and hinder them enter into currency. Language is one of the agents of mankind that can be passed from one generation to another.



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