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EMPLOYEE TURNOVER AND GOAL ATTAINMENT IN MARITIME COMPANIES IN PORT HARCOURT

Nwokolo U. Lucky¹, B. Chima Onuoha²

¹Doctoral student, University of Port Harcourt Business School

²Department of Management, University of Port Harcourt, Choba.

ABSTRACT

This study examined the effect of employee turnover on goal attainment in maritime companies in Port Harcourt, Rivers State, Nigeria. Subject for the study were 291 employees as sample size drawn from a population of 1284 using Krejcie and Morgan table. The cross-sectional survey method and stratified random sampling was used through convenience approach in the selection of respondents. The questionnaire method was used to collect relevant data for the study. Data collected was analyzed, and the analysis reveals that voluntary and involuntary turnover has a significant impact on organizations goal attainment. Conclusion was drawn; it's however obvious from the literature review and past research findings in the course of this study that employee turnover is a difficult phenomenon to control. Recommendations were given which include the need for management of maritime companies to put policy in place in areas of employee welfare and conditions of service of employees. This will reduce the exit of experienced employees from maritime companies.

KEYWORDS: *Effectiveness, Efficiency, Employee Turnover, Goal Attainment, Involuntary Turnover, Organizational Performance, Voluntary Turnover.*

INTRODUCTION

The growth of maritime companies is a vital part of any country's economy. Maritime companies have continued to develop and provide products that address economic needs. These companies have come up with motivation strategies for higher productivity in order to fit in the changing business environment dictated to some extent by the category of the international organizations coming up with more effective business strategies (Uiboupin, 2005). Nigeria has witnessed a serious growth and increase in organization whose role has been tailored to fulfill national aspirations and government has laid more emphasis on training and development of human resources mostly those in managerial cadre. Still a good number of these young executives became unsuccessful in reaching their goals because of inadequate planning. Growth and stability of these maritime companies will come when there are properly and legally structured, well managed and professionalized. Goal attainment is very important for turnover; when employees achieve what they set out to accomplish they feel satisfied and happy. Notably, it is

particularly the attainment of goals has been found to be relevant for employee turnover.

Employees who leave on the organization's request as well as those who leave on their own initiative can cause disruptions in operations, work team dynamics and unit performance. Both types of the turnover create costs for the organization. If an organization has made significant investment in training and developing its employees, that investment is lost when employee leaves (Mello, 2011). In addition to excessive employee turnover can hurt the overall productivity of a firm and is often a symptom of other difficulties. Every organization strives to have high productivity, lesser turnovers and maximum profitability. Managing turnover successfully is a must to achieve the above goals. Abassi and Hollman (2000) stressed that the managers must recognize employees as major contributor to the efficient achievement of the organization's goal attainment.

The reasons for individual turnover intention include age, gender, marriage, education levels and years of working in the organization (Liu & Wang, 2006). Previous studies found that the rate of female



employee turnover is higher, as compared to male employees. It can be associated with women duty that women need to give birth and take care of the family. Though employees work in units or positions for a long period, they feel tired and tend to leave the jobs. According to Ma, Chen, and Wang, (2003), "Employees with young, inexperienced and high education level tend to have low level of satisfaction about jobs and careers, and have lower commitment to the organization, these negative attitudes are associated with turnover intention". One of the key factors of turnover intention is Individual aptitude. When individuals have strong ability, or individuals are not core competent at their job and cannot progress them completely in the organization, they are prone to turnover intention (Chen & Li, 1998). In short, all these individual factors directly influence the turnover intention, or indirectly effect on them through the rule of other variables. Furthermore, highly motivated and performing individuals are the crucial factors of the organizational productivity. Therefore, there is need to develop a thorough understanding of the employee turnover from the perspective of causes, effect and strategies to minimize turnover. In light of this context, this study investigates the relationship between employee turnover and growth attainment of maritime companies in Port Harcourt

The consequences of high turnover are both financial and non-financial. High turnover can be a serious hurdle to productivity, quality, and profitability at firms of all sizes. For the smallest of companies, a high turnover rate can mean that simply having enough staff to fulfill daily functions is a challenge, even beyond the issue of how well the work is done when staff is available (Johnson, 2009). Employee turnover has always been one of the invisible enemies of business in any growing economy; it is invisible because most costs associated with staff turnover cannot be directly itemized in the profit and loss statement or reported at the end of the fiscal year".

Like most human endeavor there are problems that organizations are confronted with in the process of managing their workforce. Trying to achieve managerial task like planning, directing, controlling and coordinating all human activities in organizations, a lot of problems are encountered. According to Page (2001) the escalation in the rate of labour turnover is a major concern for businesses and is clearly impacting on organizational performance. Clients begin to doubt the management of such an organization and unsure whether they should continue to do business with an organization with higher staff turnover. It is against this backdrop that we are trying to examine employee

turnover and goal attainment of maritime companies in Port Harcourt.

OBJECTIVES OF THE STUDY

- i. Examine the relationship between involuntary turnover and effectiveness.
- ii. Ascertain the relationship between involuntary turnover and efficiency.
- iii. Evaluate the relationship between voluntary turnover and effectiveness.
- iv. Examine the relationship between voluntary turnover and efficiency.

LITERATURE REVIEW

Theory of Organizational Equilibrium

The theory of organizational equilibrium proposed by Marsh and Simon in 1958, considered as the first formal theory of turnover (Ngo-Henha, 2017), emphasizes the need to create a balance between contributions employees and the incentives offered by the organization. To this end, each organization must ensure that its employees benefit from equitable incentives that would stimulate the continuity of their contributions. This balance is influenced by two major considerations: (1) the perceived desire to leave the position, (2) the perceived ease of movement for the collaborator. The perceived desire to leave the post is explained by the satisfaction / dissatisfaction at work felt by the collaborator on the one hand, and the possibility / impossibility of an intra-organizational transfer on the other hand. When the employee perceives that his satisfaction with the position held is guaranteed, his tendency to leave his position is therefore less desirable. However, his dissatisfaction may push him to seek intra-organizational transfer.

The existence of this possibility, which depends mainly on the size of the organization, would substantially reduce the chances of leaving the job. Indeed, the larger the organization, the more the possibilities of transfer exist and the less the staff tends to leave. The second factor is the ease of perceived employee movement or the number of alternatives available. An employee in this case would easily leave his current organization, as the number of external offers at his disposal is reassuring and advantageous. The theory of organizational equilibrium suggests, in fact, that the probability of voluntary leaving is a function of the desire to leave and the perceived ease of departure. If the employee has no desire to leave his position, then the perceived ease of departure is not important to him. On the other hand, a collaborator who is very dissatisfied within the organization and who, therefore, expresses his wish to leave it, would



not hesitate to seize the first external alternative, provided that it is advantageous.

THE GOAL SETTING THEORY

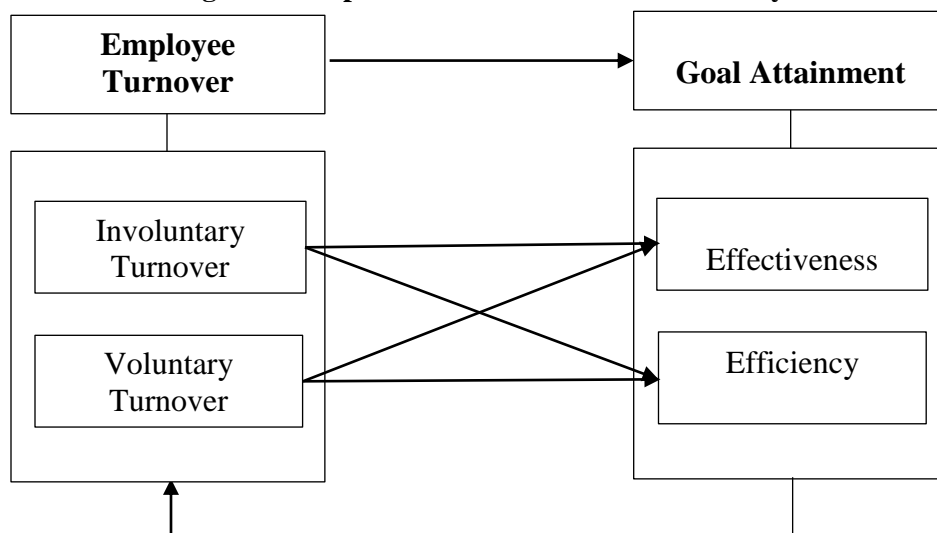
The goal setting theory is associated with the works of Gary Latham & Edwin Locke. The “goal setting is the development of an action plan intended to motivate and guide an individual or group towards an objective”. Goal setting theory assumes that behaviour comes about because of an individual's objectives and aims. Objectives impact an individual's attitude by coordinating vigorous and attention prolonging endeavours beyond regular time and encouraging the individual to create methodologies for objective achievement (Locke & Latham, 1990). Studies recommend that particularly difficult objectives ensue in better performance over obscure, easy objectives. It has been observed that goals result to superior performance in cases where individuals are focused on the goal. As a result, employees are less inclined to focus on an objective if they are of the opinion, it is troublesome. The theory states that:

- a. A specific high goal prompts higher performance than a simple goal, no goal or an ambiguous goal.
- b. regarding goal dedication, the more superior the goal, the more superior the performance
- c. variables, for example, criticism or knowledge of results, incentives, investment in decision making and rivalry just influence an employee's performance to the degree that they prompt the setting of and commitment to

a specific goal (Latham, Ganegoda & Locke, 2011).

Goal setting theory proposes that knowledge acquisition can be encouraged by giving employees particularly difficult goals and objectives. In particular, the impact of goal setting theory may be found in the generating of work plans (Locke, Shaw, Saari & Latham, 1981). Studies by Locke, et al (1981) demonstrated more specific and ambitious goals prompt more performance change than simple or general goals. This means that there is a positive straight connection between goal difficulty and work performance (Locke, & Latham, 2006). Consequent research has demonstrated that goal attainment expands self-efficacy and in addition provides a feeling of pride and accomplishment (Mento, Locke & Klein, 1992). Despite the fact that setting high goals sets the bar higher to acquire self-satisfaction and sense of well-being, achieving goals creates an elevated feeling of efficacy (personal effectiveness), self-satisfaction and sense of well-being particularly when the goals vanquished were viewed as challenging (Wiese & Freund, 2005). The goal setting theory is relevant to this work because it emphasizes the importance of training in organisations in view of its significance of measuring employees' performance and part in helping organisations attain their set goals. This is in line with the argument of Michael (2008) that the definitive goal of each training programme is to increase the value of the workforce with a specific end goal to gain competitive advantage over other organisations in the same industry.

Figure 2.1: Operational framework for the study



Source: Conceptualized by the Researcher, 2021.



The dimensions of employee turnover were adapted from the works of Mamun, & Hasan, (2017). while the measures of goal attainment were adapted from the works of Mwendwa, McAuliffe, Uduma, Masanja, & Mollel, (2017)

Employee Turnover

Employee turnover has sometimes been defined as “the ratio of the number of organizational members who have left during the period being considered divided by the average number of people in that organization during the period” (Price, 1977) and it is often detrimental to the effective functioning of an organization. On the other side, Adams and Beehr (1998) posits that ‘turnover involves leaving any job of any duration’ (Feldman, 1994) and is usually thought of as being followed by continued regular employment. Similarly, managers analyze the employee turnover as the entire process associated with filling a vacancy. Each time position is vacated, either voluntarily or involuntarily, a new employee must be hired and trained. This replacement cycle is known as turnover. This term, employee turnover, is also often utilized in efforts to measuring relations of employees in an organization as they leave, regardless of reason (Gustafson, 2002).

Employees’ turnover is a much-studied phenomenon Shaw, Delery, Jenkins, & Gupta (1998). But there is no standard reason why people leave organisation. Employee turnover is the rotation of workers around the labour market; between firms, jobs and occupations; and between the states of employment and unemployment Abassi and Hollman (2000). According to Reggio (2003), employee turnover “refers simply to the movement of employees out of an organization”. It is a negative aspect, which might lead to the failure of employee retention strategies in the organizations. “Leaving of job appears to reflect significant work place problems, rather than opportunities for advancement into better Jobs” (Holzer & Wissoker, 2001)

H01. There is no significant relationship between involuntary turnover and effectiveness.

Involuntary Turnover

Involuntary turnover includes retirement, death and dismissal. Employee turnover is regarded as involuntary when leaving the job to take care of seriously sick family member or to accompany a spouse to remote area. Therefore, employees have no control over and decide to quit the job (Martin & Martin, 2003). An involuntary turnover means a severance from employment due to the independent

exercise of the unilateral authority of the employer to terminate the employment, other than due to the employee’s implicit or explicit request, where the employee was willing and able to continue performing services (Naveh, & Erez 2004). An involuntary turnover may include the employer’s failure to renew a contract at the time the contract expires. Some researchers are of the view that involuntary turnover does not include the death of an employee or absence from work due to illness or disability.

Involuntary turnover refers to an employee’s discharge by the organization, this happens for a number of reasons, including a decline in corporate revenue, retirement, or career changes. In every case, an employee’s departure is not a result of a negative relationship with the employer. He adds that in most cases, involuntary turnover is unavoidable and part of the cost of business and life. This understanding of involuntary turnover is reflected in the explanation provided by Haskel, and Martin (2001). Involuntary turnover is caused by layoffs and similar actions where the decision for an employee to leave is made by the company and not the employee. In a research on involuntary turnover amongst executives, Shen and Cho (2005) explain involuntary turnover to be the situation whereby executives are forced to leave the organization for reasons other than age or health concerns. Some of these reasons include but not limited to non-performance and the need to align with changing environmental demands. March (1991) adding their voice to involuntary turnover by limiting it to tertiary institutions indicated that an organization can take such action as a result of gross unethical or criminal behaviour such as the use of university funds or release of confidential information. This can also be extended to misrepresentation of facts and employees’ unwillingness to adhere to terms and conditions of employment. Since involuntary turnover has its own effects, it is necessary for organization to measure them and make decisions as to what extent they are benefiting from such practice.

Voluntary Turnover

Voluntary turnover refers to when employees quit, that is when they decide to end their relationship with organizations on their own, whereas involuntary turnover occurs when employers fire or lay off workers (Hausknecht & Trevor 2011; Selden & Moynihan 2000). Therefore, the key distinction between the two types of turnover lies in who initiated the process. Unfolding model” of voluntary turnover represents a divergence from traditional thinking (Hom & Griffeth, 1995) by focusing more on the decisional aspect of



employee turnover, in other words, showing instances of voluntary turnover as decisions to quit. While employees quit the job from an organization, it is stated as voluntary turnover (Noe, Hollenbeck, Gerhart, & Wright, 2006). It is set off the decision of the employee. Another definition is furnished by Egan, Yang, and Bartlett, (2004), indicating “An instance of voluntary turnover, or a quit, reflects an employee’s decision to leave an organization, whereas an example of involuntary turnover, or a discharge, reflects an employer’s decision to terminate the employment relationship”.

Voluntary turnover can be affected by not having job satisfaction, job stress, as well as due to getting a better job at another organization, a conflict with a manager, or personal matter such as staying home and giving enough time to the family member (Manu & Shay, 2004). It is, therefore, essential to reflect on attractions such as alternatives whilst appearing to voluntary turnover. Nevertheless, voluntary turnover can be foreseen and, in turn, be managed. Chiu and Francesco (2003) define involuntary turnover as “... an instance of involuntary turnover, or a discharge” that “reflects an employer’s decision to terminate the employment relationship”.

H02. There is no significant relationship between voluntary turnover and effectiveness.

Goal Attainment

Goals are specific targeted achievements of an individual or organization. Goals have a pervasive influence on employee behavior and performance in organizations and management practice (Locke & Latham, 2002). “Nearly every modern organization has some form of goal setting in operation. Programs such as management by objectives (MBO), high-performance work practices (HPWPs), management information systems (MIS), benchmarking, stretch targets, as well as systems thinking and strategic planning, include the development of specific goals”. Furthermore, Fred opined that goal setting which aids employee’s goal attainment is the underlying explanation for all major theories of work motivation. Managers widely accept goal setting as a means to improve and sustain performance (DuBrin, 2012).

Employees perform at higher levels when asked to meet a specific goal target. Requesting employees to improve, to work harder, or to do their best is not helpful, because that kind of goal does not give them a focused target. Goal specification enables members know what target to attain and allow them to measure their own progress. Research indicates that specific goals help bring about other desirable organizational

goals, such as reducing absenteeism, tardiness, and turnover (Locke & Latham, 2002). Employee becomes more loyal and stay in the organization, meeting the work targets when they identify themselves within a group and contribute to the performance as a group. This suggestion relies on work performed by Locke and Latham goal setting theory. The goal is team performance and the individual feeling part of the group. The focus of Locke was on the goal, but in order to reach the goal one must associate oneself with the group and task.

Effectiveness

Companies are concerned with output, sales, quality, creation of value added, innovation, cost reduction. It measures the degree to which a business achieves its goals or the way outputs interact with the economic and social environment. Usually, effectiveness determines the policy objectives of the organization or the degree to which an organization realizes its own goals (Zheng, Yang, & McLean 2010). Meyer and Herscovitch (2001) analyzed organizational effectiveness through organizational commitment. Commitment in the workplace may take various forms, such as relationship between leader and staff, employee’s identification with the organization, involvement in the decision-making process, psychological attachment felt by an individual. Shiva and Suar (2012) agree that superior performance is possible by transforming staff attitudes towards organization from lower to a higher plane of maturity, therefore human capital management should be closely binded with the concepts of the effectiveness.

According to Heilman and Kennedy-Phillips (2011) organizational effectiveness helps to assess the progress towards mission fulfillment and goal achievement. To improve organizational effectiveness management should strive for better communication, interaction, leadership, direction, adaptability and positive environment. Back in 1988, Seiichi Nakajima has introduced the concept of Total Productive Maintenance, which has been widely applied in the plants and covered the entire life of the equipment in every department including planning, manufacturing, and maintenance (Fu-Kwun, 2006; Muthiah & Huang, 2006). The system allowed assessing overall performance of the plant, since it covered:

- i. Total effectiveness (productivity, quality delivery, safety, social responsibility and morals).
- ii. Total maintenance system (maintenance prevention system, maintainability improvement);



- iii. Total participation of the employees (the increase of the effectiveness of the plant depends on the involvement of the staff, regardless of the department they belong to).

According to Porter (1996), Total Productive Maintenance system could be applied as a tool not the strategy for managers to ensure operational effectiveness. The author stressed out the fact that effectiveness management tools and techniques such as benchmarking, time-based competition, outsourcing, partnering are slowly taking the place of the strategy. It is a result of organizations' frustration of their inability to translate goals into sustainable profitability.

H0₃. There is no significant relationship between voluntary turnover and effectiveness.

Efficiency

Efficiency measures relationship between inputs and outputs or how successfully the inputs have been transformed into outputs (Low, 2000). To maximize the output Porter's Total Productive Maintenance system suggests the elimination of six losses, which are: (1) reduced yield – from start up to stable production; (2) process defects; (3) reduced speed; (4) idling and minor stoppages; (5) set-up and adjustment; and (6) equipment failure. The fewer the inputs used to generate outputs, the greater the efficiency. According to Pinprayong and Siengthai (2012) there is a difference between business efficiency and organizational efficiency. Business efficiency reveals the performance of input and output ratio, while organizational efficiency reflects the improvement of internal processes of the organization, such as organizational structure, culture and community.

Excellent organizational efficiency could improve entities performance in terms of management, productivity, quality and profitability. The Pinprayong and Siengthai (2012) introduced seven dimensions, for the measurement of organizational efficiency: Organizational strategy; Corporate structure design; Management and business system building; Development of corporate and employee styles; Motivation of staff commitment; Development of employee's skills; Subordinate goals

H0₄. There is no significant relationship between involuntary turnover and efficiency.

Empirical Review

Ferreira, & Almeida, (2015) investigated the relationship between employee turnover and performance in retailing. The study used data from a single company with several comparable branches and tested whether stores with lower employee turnover

have better financial and organizational results (sales and workplace accidents, respectively). This study also analyzes whether Human resources practices, such as rewards, recognition and training, affect employee turnover. The empirical results indicate a strong relationship between employee turnover and sales, supporting results from previous studies. However, the additional relationships were not confirmed. The results do not rule out some hypotheses about the relationship between employee turnover and labor accidents, and further suggest that human resources management practices may increase employee turnover, depending on their motivation and strategic alignment.

Ibrahim, Usman, and Bagudu, (2013) examined the labour turnover among state owned institutions in Niger state, Nigeria. Subject for the study were fifty-eight (58) drawn from three state owned institutions in Niger state, namely Niger State Polytechnic, Niger State College of Education and Niger State School of Nursing. The stratified random sampling technique was used through convenience approach in the selection of subjects. The questionnaire method was used to collect relevant data for the study. Data collected was analyzed, and the analysis reveals that most employees leave for other institution because of inequity in pay (salary). They also reveal that the attitude and management leadership style towards promotion and advancement constitute a major reason why they leave state owned institutions. The study concludes that employee turnover is a difficult phenomenon to control and thus recommends the need for Niger state government to put policy in place through given of directive to managers of state-owned institutions in areas of implementing the policies relating to staff welfare and conditions of service of employees. This will reduce the exit of experienced employees from state owned institutions.

Tanikin (2005) studied organizational goal attainment in UK (United Kingdom) in a plastic manufacturing company with sample size of 250 workers, using descriptive survey design to establish the effect of worker training and motivation and organizational goal attainment the findings positively show that there is great relationship between employee training and motivation and organizational goal attainment

Hasket, Hawkes and Pereira (2003) carried out a research in Lurich to investigate the relationship between sustainability and organizational goal attainment in 20 hospitals using descriptive survey design, data were collected with questionnaire and it was tested using correlation. The findings showed that there is significant relationship between sustainability



and organizational goal attainment in those hospitals used.

Dearden and Van Reenen (2000) analyzed the effect of survival strategy of employees and organizational goal attainment using 87 breweries in Belgium, structured questionnaire was administered to people data generated were analyzed using multiple regression to ascertain the relationship between survival strategy and organizational goal attainment. The findings showed that there is positive relationship between survival strategy and organizational goal attainment.

Ojo, Osibanjo and Oyewunmi (2014) investigated career development as a determinant of organizational growth carried out in the banking sector in Lagos through survey research and found that given the competitive and dynamic nature of today's business, employers may not be able to retain their trained and developed employees having exposed them to various training and development opportunities, they should employ better strategies in retaining their experienced employees, which tends to have great effect on the organizational growth

METHODOLOGY

Research Design and Population of the Study

The study adopted the cross-sectional survey method, which is a form of the quasi-experimental research design. The population of this work consist of 1284 employees from 10 selected maritime companies in Port Harcourt. Krejcie and Morgan table was used to arrive at a sample size of 291 while the Bowley's formula was used for proportional allocation of questionnaire samples. Copies of the questionnaire were administered to the respondents via email and personal contacts out of which 265 valid copies representing 91% were correctly filled and used for further analyses. The instrument was subjected to construct and convergent validity. The reliability of the instrument was also tested using the Cronbach Alpha test. The Spearman Rank Order Correlation Coefficient was used to test the hypotheses.

Operational Measures of Variables

The independent variable employee turnover, was measured using a 10-items scale which were carefully selected to reflect the dimensions (involuntary and voluntary turnover). Amongst the items include

“Staff turnover causes a decline in services provision; High staff turnover cause employee not to meet their deadlines; Work boredom is the causes of staff turnover;”. These items were extracted from literature. The dependent variable is goal attainment which was measured using a 10-item scale which were carefully selected to reflect the measures (effectiveness and efficiency). Among the items include “There is always someone substituting me when I get medical report or take a leave; Given the right motivation, I believe I can solve most problems that confront me; Employees are provided with the power to make workplace decisions, and implement decisions effectively”. The items for decision making were extracted from literature.

RESULTS AND DISCUSSIONS

Table 1 below shows the descriptive statistics of the correspondents. Gender indicates that there are more male respondents 193 (72.7%) than female respondents 72 (27.3%). Marital status shows that a greater portion of the respondents are married representing 135 (50.9%) of the study respondents followed by 102 (38.3%) who identify as single while 16 (6.2%) were divorced and 12 (4.6%) were widowed. The age distribution shows that those within the age bracket of 30 – 39 years dominated the maritime companies studied representing 99 (37.4%) of the study respondents followed by 91 (34.4%) respondents who are between 40 – 49 years while 48 (18.2%) respondents are between 20 – 29 years and lastly 27 (10.1%) of the study respondents are greater than or equal to 50 years of age. Educational qualification distribution shows that a greater portion of the study respondents have MSC or its equivalent and this represents 124 (46.9%) followed by those who affirm to have HND/BSc. or its equivalent representing 101 (38%) and lastly those who have PhD or its equivalent representing 40 (15.1%) of the study respondents. Years of experience distribution indicates that most of the respondents have quite a good year of experience with 132 (49.8%) having 6-10 years of experience followed by 75 (28.3%) respondents who have 0 – 11 years of experience and lastly those who have 11 years and above experience representing 58 (21.9%). Thus, it could be concluded that the maritime industry is largely dominated by male employees and the employees are highly educated. This could have a positive impact in the rate of employee turnover.



Analysis of Demographic Profiles of Respondents

Variable	Item	Frequency	Percent (%)
Gender	Male	193	72.7
	Female	72	27.3
Marital Status	Single	102	38.3
	Married	135	50.9
	Divorced	16	6.2
	Widowed	12	4.6
Age	20 – 29 Years	48	18.2
	30 – 39 Years	99	37.4
	40 – 49 Years	91	34.3
	>= 50	27	10.1
Educational Qualification	HND/B.Sc.	101	38.0
	M.Sc.	124	46.9
	PhD	40	15.1
Years of experience	0 – 5 Years	75	28.3
	6 – 10 Years	132	49.8
	11 Years & Above	58	21.9

Source: Field Data, 2021.

STATISTICS DATA ANALYSIS

Spearman’s rank order correlation coefficient was used in testing hypotheses in the study. This was carried out through SPSS 27 software. The decision

rule: reject null hypothesis if p-value obtained is less than the alpha value of 0.05 and accept the null hypothesis when p-value is greater than the alpha value (0.05).

Ho₁: There is no significant relationship Involuntary Turnover and Effectiveness
Correlations

		Involuntary Turnover		Effectiveness
Spearman's rho	Involuntary Turnover	Correlation Coefficient	1.000	.571**
		Sig. (2-tailed)	.	.000
		N	265	265
	Effectiveness	Correlation Coefficient	.571**	1.000
		Sig. (2-tailed)	.000	.
		N	265	265

** . Correlation is significant at the 0.01 level (2-tailed).
SPSS output, Version 27

Result shows a strong positive statistically significant relationship between involuntary turnover and effectiveness (0.571). The coefficient of determination ($r^2 = 0.33$) implies that involuntary turnover impacts 33% change in effectiveness. The significant value of

0.000 ($p < 0.05$) reveals a strong and positive relationship. The null hypothesis was rejected and the alternate hypotheses accepted. Thus, there is a significant relationship between involuntary turnover and effectiveness.

Ho₂: There is no significant relationship Involuntary Turnover and Efficiency
Correlations

		Involuntary Turnover		Efficiency
Spearman's rho	Involuntary Turnover	Correlation Coefficient	1.000	.468**
		Sig. (2-tailed)	.	.004
		N	265	265
	Efficiency	Correlation Coefficient	.468**	1.000
		Sig. (2-tailed)	.004	.
		N	265	265

** . Correlation is significant at the 0.01 level (2-tailed).
SPSS output, Version 27



Result shows a very strong positive statistically significant relationship between involuntary turnover and efficiency (0.468). The coefficient of determination ($r^2 = 0.22$) implies that 22% change in efficiency is triggered by the level of involuntary turnover. The

significant value of 0.004 ($p < 0.05$) reveals a strong and positive relationship. Thus, the null hypothesis was rejected, while the alternative hypothesis which states that, there is a significant relationship between involuntary turnover and efficiency was accepted.

Ho₃: There is no significant relationship Voluntary Turnover and Effectiveness
Correlations

			Voluntary Turnover	Effectiveness
Spearman's rho	Voluntary Turnover	Correlation Coefficient	1.000	.645**
		Sig. (2-tailed)	.	.000
		N	265	265
	Effectiveness	Correlation Coefficient	.645**	1.000
		Sig. (2-tailed)	.000	.
		N	265	265

** . Correlation is significant at the 0.01 level (2-tailed).

SPSS output, Version 27

Result shows a strong positive statistically significant relationship between voluntary turnover and effectiveness (0.645). The coefficient of determination ($r^2 = 0.42$) implies that voluntary turnover is a significant predictor of effectiveness as it accounts for 42% variation in effectiveness. The significant value of

0.000 ($p < 0.05$) reveals a strong and positive relationship. The null hypothesis was rejected and the alternate hypotheses accepted. Thus, there is a significant relationship between voluntary turnover and effectiveness.

Ho₄: There is no significant relationship Voluntary Turnover and Efficiency
Correlations

			Voluntary Turnover	Efficiency
Spearman's rho	Voluntary Turnover	Correlation Coefficient	1.000	.674**
		Sig. (2-tailed)	.	.000
		N	265	265
	Efficiency	Correlation Coefficient	.674*	1.000
		Sig. (2-tailed)	.000	.
		N	265	265

** . Correlation is significant at the 0.01 level (2-tailed).

SPSS output, Version 27

Result shows a strong positive statistically significant relationship between voluntary turnover and efficiency (0.674). The coefficient of determination ($r^2 = 0.45$) implies that voluntary turnover influences 45% of operational efficiency. The significant value of 0.000 ($p < 0.05$) reveals a strong and positive relationship. The null hypothesis was rejected and the alternate hypotheses accepted. Thus, there is a significant relationship between voluntary turnover and efficiency.

on awareness of voluntary and involuntary turnover reveals that most respondents strongly agreed and majority also strongly believed that turnover has effect on productivity and organizational goal attainment. Organisational effectiveness captures goal attainment and the plethora of internal performance outcomes normally associated with more efficient or effective operations. Since the organisation has as its goal the preparation of supplies and the delivery of those services to employees, it measures its goal attainment by trying to determine what actual activities the people in the organisation do in order to generate the outcomes the organisation wants to create. This finding corroborates with that of Kleiman (2003), who sees goal attainment and the as the degree to which the organisation realizes its goals, given certain resources and means, achieves its objectives without placing

DISCUSSION OF FINDINGS

Base on analyses of data collected from employees of maritime companies in Port Harcourt. The respondent's demographic distribution shows that majority of respondents are male. This finding reveals that majority of respondent's holds Master Degree, these findings reflect in the analyses. Respondents view



undue strain on its employees. Also, Michal, Nissly, and Levin. (2001), conclude that an organization's ability to mobilize and retain employees would result in effective and efficient service delivery

CONCLUSION AND RECOMMENDATIONS

Turnover is a burning issue for maritime companies in Port Harcourt. For the steady flow of business operation and constant goal attainment, it is essential to maintain a skilled workforce. But controlling turnover rate tends to be difficult within this organizations. Obviously satisfactory salary structure helps to reduce turnover though job security is also an important issue too as reveal by respondents in their comments. A person does not stay in an organization only for salary but he/she may stay for many other reasons such as good stream relation, better working environment, preferable job location, good style of management etc. Since attainment of goal within the organization depends on the expertise of its workforce. An experienced worker may be an asset for any organization. If a skilled person, experienced and qualified worker leaves an organization the effects will be very high, this was evident in this research.

Managers should examine the sources of employee turnover and recommend the best approach to fill the gap of the source, so that they can be in a position to retain employees in their organisation to enhance their competitiveness in this world of globalization. Managers must understand that employees in their organizations must be treated as the most liquid assets of the organisation which would make the organisation to attain set goals. This asset needs to be monitored with due care, otherwise their organizations would cease to exist. Employees should be given challenging task and all managers should be hired on the basis of know-how by following laid down procedures of the organisation and this would make organisation to have competent managers at all levels of management and hence good supervision

Management should instigate further programs to understand why employees quit the organization and identify the issues that attract and retain them in the organizations. Job satisfaction is the key determinant of turnover intention. Hence, if the above sound strategies are applied, there is a possibility that business organizations continue to exist in a vibrant environment by taking into account their workforce as a vital resource.

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SAFETY CLIMATE AND ORGANIZATIONAL PERFORMANCE OF THE OIL AND GAS SECTOR IN NIGERIA

ONUEGBU Peter Onyeka¹, B. Chima ONUOHA²

¹Doctoral Candidate, University of Port Harcourt Business School, Port Harcourt, Rivers State, Nigeria.

²Department of Management, University of Port Harcourt, Port Harcourt, Choba, Rivers State, Nigeria.

ABSTRACT

This study empirically established the link between safety climate and organizational performance in the Nigerian oil and gas industry. The safety climate constructs examined include safety supervision, safety promotion and safety commitment. A cross-sectional survey was used in carrying out the investigation. The population of this study comprised four (4) selected oil and gas producing companies with a total population of 1300 employees. The sample size consists of 306 employees proportionally selected from the four companies. The research instrument used for collecting data is the questionnaire administration. The data obtained were analyzed using frequency distribution, mean, standard deviation, correlation and regression analyses. The study found that safety climate constructs such as safety supervision, safety promotion, and safety commitment significantly impact organizational performance. The study recommends that an effective safety climate can be sustained by applying the appropriate leadership practices, promote a healthy safety system and reward the safety commitment of workers. It is also recommended that the management of oil and gas firms should encourage employees to offer suggestions and ideas for improving performance in safety-related issues. The involvement of the employees will help to change unconstructive attitudes and make them more dedicated to the attainment of the organizations' goals.

KEYWORDS: Climate, Performance, Safety commitment, Safety promotion, Safety supervision.

INTRODUCTION

Safety climate is part of the overall common understanding of the "state of safety" in the place of work. The term was first used based on the Chernobyl nuclear calamity when it was recommended that accidents can be reduced and safety incidents promoted in organisations by cultivating positive safety hallmarks (Hatch, Ron, Bouville, Zablotzka & Howe, 2005). The fancifulness of safety climate is not only prominent in the oil and gas sector but also in sectors such as healthcare, manufacturing, aviation, transportation, military and so on. Safety culture and safety climate are used substitutably. However, in this research work, safety culture is an umbrella term encapsulating different viewpoints of values and actions on safety-related issues in organisations while safety climate specifically deals with perceptions of staff on safety and its management in organisations.

Performance of employees is higher when they are physically and emotionally stable to work and cultivate a desire to work especially in a safe and secure environment. A higher level of performance leads to an increase in productivity, which in turn can

lead to higher profits (Olatunji, 2018). As opined by Riedel (2001:169), "greater gains may be experienced when employees work in a safe environment thereby leading to improved quality of goods and services, greater creativity and innovation, enhanced resilience and increased intelligent capacity".

Previous studies on the link between safety climate and performance in the Nigerian context is scanty. Aside from a study conducted by Olatunji (2018) on safety management and job performance of employees in selected hospitals in Ondo State, Nigeria, there are no clear-cut studies on the nexus between safety climate and performance in Nigeria. Most studies on safety climate were conducted outside Nigeria. For instance, Kalteh, Mortazavi, Mohammadi and Salesi (2019) examined the relationships between safety climate and safety performance indicators in retrofitting works while Skogdalen, Utne and Vinnem (2011) developed safety parameters for checkmating offshore oil and gas deepwater drilling blowouts. Other prominent works done in this area include comparing the differences in safety climate in healthcare and



petroleum industries (Oslen & Aase, 2010); safety climate and mindful practices in the oil and gas industry (Dahl & Kongsvik, 2018); safety compliance and safety climate (Kvalheim & Dahl, 2016); developing and validating safety climate scale for the manufacturing industry (Ghahramani & Khalkhali, 2015), among others. A critical review of the aforementioned studies shows that common safety climate dimensions include safety commitment and communication, safety involvement and training, positive safety practices, safety competence, safety promotion and procedures, supportive environment, safety prioritization, safety supervision, safety system, work pressure, safety communication, management value, top management commitment to safety, top management safety practices, supervisory safety behaviour, among others (Ghahramani & Khalkhali, 2015; Oslen & Aase, 2010; Dahl & Kongsvik, 2018; Kvalheim & Dahl, 2016). These constructs have not been empirically validated in the Nigerian oil and gas sector. Therefore, the crux of this study is to empirically investigate some of these constructs in the oil and gas sector in Nigeria.

This study focuses on how safety climate impact the performance of the oil and gas sector. The justification for focusing on the oil and gas sector is that the sector plays a strategic role in generating substantial financial resources in Nigeria for financing both capital and recurrent expenditure. It is believed that the industry will continue to serve as the backbone of the Nigerian economy in the nearest future. Discourse on safety climate and performance is germane in the sector because safety is rooted in the perceptions of individual employees (Borgheipour, Eskandari, Barkhordari & Tehrani, 2020). Safety in the workplace is a philosophy that empowers every member of the organisation in terms of participation, contribution and making valuable suggestions for improvement in organisations (Fapohunda, 2012). Safety consciousness helps to advance continuous and sustained improvement in quality and performance, and develop an attitude of quality culture and pattern (Fapohunda, 2012). The safety climate constructs selected in this study for empirical investigation include safety supervision, safety promotion, and safety commitment and how they impact the safety performance of oil and gas companies in the country.

STATEMENT OF THE PROBLEM

Previous studies on the relationship between safety climate and performance is scanty in the Nigerian context. This serves as one of the gaps this study intends to fill. Aside from a study conducted by Olatunji (2018) on safety management and job performance of employees in selected hospitals in Ondo State, Nigeria, there are no clear-cut studies on the nexus between safety climate and performance in

Nigeria. Most studies on safety climate were conducted outside Nigeria. For instance, Evan et al (2019) examined the relationships between safety climate and safety performance indicators in retrofitting works while Jon et al (2011) developed safety indicators for preventing offshore oil and gas deepwater drilling blowouts. Other prominent works done in this area include comparative study of safety climate differences in healthcare and petroleum industry (Oslen & Aase, 2010); safety climate and mindful safety practices in the oil and gas industry (Dahl & Kongsvik, 2018), among others. A critical review of the aforementioned studies shows that common safety climate dimensions include safety commitment and communication, safety involvement and training, positive safety practices, safety competence, safety promotion and procedures, supportive environment, safety prioritization, safety supervision, safety system, work pressure, top management commitment to safety, supervisory safety behaviour, among others. To the best of the researcher's knowledge, these constructs have not been empirically validated in the Nigerian oil and gas sector.

This study focuses on the safety climate of the oil and gas sector. This is because the sector in Nigeria plays strategic role in generating substantial financial resources for financing both capital and recurrent expenditure. It is believed that the industry will continue to serve as the backbone of the Nigerian economy in the nearest future. Discourse on safety climate and performance is critical in the sector because safety is rooted in the perceptions of individual employees (Evan et al, 2019). Safety in the workplace is a philosophy that empowers every member of the organisation in terms of participation, contribution and to make valuable suggestions for improvement in organisations (Fapohunda, 2012). Safety consciousness helps to promote continuous and sustained improvement in quality and performance, and develop an attitude of quality culture and pattern (Fapohunda, 2012). The safety climate constructs selected in this study for empirical investigation include safety supervision, safety promotion, and safety commitment and how they impact on the performance of oil and gas companies in the country.

Finally, performance of employee is higher when they are physically and emotionally able to work and have a desire to work especially in a safe and secure environment. Higher level of employee performance leads to higher levels of productivity, which in turn can lead to higher profits (Olatunji, 2018). As opined by Riedel (2001), greater gains may be experienced when employees work in a safe environment thereby leading to improved quality of goods and services, greater creativity and innovation, enhanced resilience and increased intelligent



capacity. We intend to empirically establish how safety climate constructs can influence organisational performance in terms of employee involvement and job satisfaction.

OBJECTIVES OF THE STUDY

- i. Determine the influence of safety supervision on organizational performance of oil and gas firms operating in Nigeria.
- ii. examine the impact of safety promotion on organizational performance of oil and gas firms operating in Nigeria;
- iii. examine the influence of safety commitment on organizational performance of oil and gas firms operating in Nigeria;

RESEARCH QUESTIONS

- i. What is the influence of safety supervision on organizational performance of oil and gas firms operating in Nigeria?
- ii. To what extent does safety promotion impact organizational performance of oil and gas firms operating in Nigeria?
- iii. What is the influence of safety commitment on organizational performance of oil and gas firms operating in Nigeria?

LITERATURE REVIEW

Safety performance is defined as “the quality of safety-related work”. According to Mousavi, Cudney and Trucco (2017), “safety performance improvements in an organization can increase its resistance or robustness and lower the risk of accidents”. Kuranchie-Mensah and Amponsah-Tawiah (2016) described performance as the work-related actions anticipated of a worker and how soundly those activities are implemented. Abiante (2018) succinctly captures performance as “what is to be achieved at an organizational level by workers as it involves the workers agreed on measures, skills, competency requirements, development plans, and the delivery of results”. In line with OSHA (2013) postulations, effective safety performance is characterised by having the following interrelated and interconnected core elements necessary for attaining success are:

Employee participation: Due to the unique employees' knowledge of the workings of the organisations, their involvement in all aspects of the safety and health management system is highly required. This participation can be inform of goal setting, identification and reporting of hazards, incidents investigations and progress tracking (Simsekler, 2019). Employees must be properly trained in understanding their role and responsibilities under the safety and health system to carry out their duties effectively. A conducive

environment that promotes open communication with management and reporting safety and health concerns helps to enhance the participation of employees in organisational activities and safety issues (Curcuruto, Strauss, Axtell & Griffin, 2020).

Risk identification, assessment and prevention:

Hazard identification and risk assessment involve a critical sequence of information gathering and the application of a decision-making process (Onuegbu & Eniola, 2018). Processes and procedures must be put in place to guarantee continuous identification and evaluation of workplace hazards and risks. In doing this, the first step is to assess existing hazards and put in place appropriate control mechanisms. This must be followed by intermittent reassessment for identifying new hazards and designing preventive framework and control measures (White, 2010). Finally, processes, procedures and programmes are formulated and implemented to minimize hazards in the workplace to achieve safety and health goals.

Education and training: Education plays a critical role in helping all employees to perform their responsibilities under the safety and health management system. Besides, all employees should be taught the nitty-gritty of the procedures for identifying hazards in the workplace and the appropriate control mechanisms to forestall risks and accidents.

Safety climate and its dimensions in the Workplace

Generally, safety means the absence of occurrence of injury or loss arising from various degrees of hazards in the workplace. Thus, Aswathappa (2004) describes safety in the workplace as the protection of employees from the hazards of industrial accidents. Safety is an important concept in management and organizational behavior. Abraham Maslow in his motivational theory identified safety as the second order of needs that individuals desired to satisfy in the hierarchy of needs (Maslow, 1989). Organisations that seek to motivate employees for exceptional performance often formulate appropriate policies and guidelines that guarantee and promote safety from different occupational hazards. According to Vinodkumar and Bhasi (2009:660), “safety climate can be described as “employees shared perceptions of the importance and the priority of the safety together with the safety policies, practices and applications in the workplace”. In this study, three constructs of safety climate are examined namely: safety supervision, safety promotion and safety commitment. These constructs are discussed as follows:



Safety Supervision: As opined by Flin and O'Dea (2000), management/supervision measure of safety climate is clearly explained in the literature. Supervision is generally measured by evaluating employees' satisfaction with supervision or their assessment of the supervisors' attitude and behaviour towards safety issues. As explained by Zohar (2010), employees' perception of types of behaviour that are expected, supported and rewarded determine the safety climate in the workplace. As a result of this, supervisors or management play a critical role in communicating and setting safety behaviour standards. Yang (2010) found that leaders or supervisors positively determine the safety climate among workers by expressing safety concerns, explaining safety policies and rewarding safe behaviour in the workplace. Dahl and Olsen (2013) observed that leadership is also found to be more positive when leaders are involved in the daily operations of the company.

If effective supervisory platforms are created for employees to fully participate in safety activities and programmes, they will acquire new skills and knowledge. Effective supervision in safety programmes will assist in realizing the benefits of higher performance; and obtain a sense of attainment by solving safety-related problems in the workplace (Zhang, 2000). Organisations need to design a formal system for encouraging, monitoring and rewarding employee involvement and participation. As identified by Ahire, Waller and Golhar (1996) and Kumar and Gupta (1991), cross-functional quality improvement teams with requisite evaluation and reward framework help in improving safety consciousness.

Safety Promotion: According to Maurice, Lavoie, Laflamme, Svanström, Romer and Anderson (2007), "safety promotion is a process that promotes safety at the workplace. Safety promotion is the process applied at a local, national and international level by individuals, communities, governments and others, including enterprises and non-governmental organisations, to develop and sustain safety". This process includes modifying structures, environment (physical, social, technological, political, economic and organisational) and employees' attitudes and behaviours toward safety matters in the workplace. In this study, safety promotion is selected as one of the safety climate constructs. Safety promotion can be evaluated using items related to identifying safe-conduct as a positive factor for promotion; compensate employees for reporting hazards, create advertency among workers through programmes such as safety week celebrations and promoting healthy competition among workers to report acts and conditions that are not safe as well as encouraging

workers to report safety matters (Vinodkumar & Bhasi, 2010).

Safety promotion that will result in better performance in the organisation should be based on rewarding employees for disclosing safety hazards by giving them cash or other forms of recognition; celebrating safety week and other safety promotional activities; creating safety consciousness among the employees; and creating room for wholesome competition among employees to identify and report conditions and acts that are not safe in the workplace, amongst others.

Safety Commitment: Safety literature glaringly demonstrates the need for top management support and commitment as a key determinant for successfully implementing safety practices and advancing business effectiveness and efficiency. Safety consciousness must be entrenched throughout organization which must be championed and demonstrated by top management. Deming (1986) argues that top management must see themselves as role models and mentors in taking the lead in planning, communicating, training and evaluating performance to guarantee effective attainment of corporate goals. As pointed out by Oakland (2003), senior directors and other management teams must show commitment to safety as a way of leading by example and the need to promote a safe workplace. According to Garvin (1986), "high levels of quality performance have always been achieved by an organizational commitment to that goal and high-product quality which does not exist without strong top management commitment". Chapman and Hyland (1997) suggest that top management plays critical role in transforming the environment of the organisations by providing leadership supports and creating platforms for continuous interactions among the organisational members. Quality plans should be actively developed by top management to achieve business goals and objectives; disseminate the philosophy of the company to the employees and engage them in safety activities and advancement to motivate employees to achieve results and ensure that available resources are prudently used for employee education and training (Jurburg, Viles, Tanco & Mateo, 2017).

Theoretical Framework

This paper is built on action theory. The theory as explained in relation to safety climate suggests that objective situational factors such as management commitment to safety, management safety practices and supervisory safety behaviour are social actions that must be considered within systems of action orientation at the organisation level. For instance, if a worker or employee perceived that top management is not showing commitment to his/her



protection and welfare in the workplace, this could lead to poor performance. According to Dekker, Cilliers and Hofmeyr (2011), action theory explains safety climate as “an emergent model because of complex reciprocal interactions and relationship about the priority of safety based on how safety climate factors influence actions”. Studies have been conducted to establish the relationship between safety climate and performance using action theory as a theoretical framework. Some of the studies include Kalteh *et al* (2019); Kauabenan, Ngueutsa and Mbaye (2015); Kiani and Khodabakhsh (2013); Oah, Na and Moon (2017), amongst others.

METHODOLOGY

The focus of the research is to examine the link between safety climate and performance in oil and gas producing companies in Nigeria. The type of research design is causal as the study seeks to establish the link between safety climate and performance. The survey research approach was employed through the use of a structured questionnaire. The level of control the researcher has over the elements of the research is minimal as it is survey research in a non-contrived setting. In terms of time horizon, the research is a cross-sectional study as it was carried out once and represents a snapshot of one point in time.

The population of this study comprised four (4) selected oil and gas producing companies. The selection was based on organizations that have been in existence for over ten (10) years and operating as oil and gas companies in Nigeria. The identity of the Companies is coded to comply with the confidentiality agreement between the companies and the researchers. The population of the companies is 120, 650, 420 and 110 for Companies A, B, C and D respectively. The total population of staff in the four oil and gas companies is 1300.

Using Yamane’s formula, $n = \frac{N}{1+N(e^2)}$, the sample size was computed to be 306. Due to the heterogeneous nature of the population and subsequent sample, the proportional sampling technique was deployed in selecting the representative sample. The sample size of the companies are 28, 153, 99 and 26 for Companies A, B, C and D respectively.

The method of data collection was a structured questionnaire for employees of the selected oil and gas producing companies. The questionnaire was structured according to the different constructs used for safety climate and organisational performance using five-point Likert scale with ‘5’ for ‘Strongly Agree’ and ‘1’ for ‘Strongly Disagree’. The content validity of the research instrument was established by experts in the field of safety management and human resource management. For the reliability test, SPSS Cronbach’s Alpha test was used. The reliability values for the variables are: safety supervision (0.720); safety promotion (0.652); safety commitment (0.831); and safety performance (0.755). It can be concluded that the instrument is reliable. The different analyses (descriptive and inferential) were done using SPSS version 24.0 software to estimate the link between safety climate and organizational performance.

RESULTS AND DISCUSSIONS

Description of respondents’ background information

This section contains the different background information of the respondents which includes company, gender, age, marital status, educational qualification, training frequency and the departments of the respondents. The results are presented in Tables 1 and 2 below:

Table 1: Questionnaire distribution to sampled oil and gas firms

S/N	Organizations	Questionnaire		ResponseRate (%)
		Administered	Valid	
1	Company A	153	133	86.9
2	Company B	28	14	50.0
3	Company C	99	78	78.8
4	Company D	26	18	69.2
Total		306	243	79.4

Note: Response rate = $\frac{\text{Number of valid questionnaire}}{\text{Number of administered questionnaire}} \times 100$

Table 1 shows that 306 copies of questionnaire were administered while 243 copies were found to be valid and usable. The response rates for the companies are Company A (86.9%),

Company B (50%), Company C (78.8%), and Company D (69.2%). The overall total response rate stands at 79.4%.



Table 2: Respondents Demographics

Variable	Category	Frequency	Percent
Gender	Male	216	88.9
	Female	27	11.1
	Total	243	100
Marital status	Single	36	15.5
	Married	197	84.5
	Total	233	100
Age	Below 21years old	5	2.1
	21-30years	18	7.4
	31-40years	89	36.6
	41-50years	105	43.2
	51years and Above	26	10.7
	Total	243	100
Educational qualification	First Degree	121	49.8
	Masters	117	48.1
	PhD	5	2.1
	Total	243	100

Table 2 reveals that majority of the respondents are male, which are 216 accounting for 88.9% of the respondents. The female respondents were 27 representing 11.1%. For the marital status, the result shows that 36 (14.8%) of the respondents were single, while 197 (81.1%) were married. Only 10 respondents representing 4.1% of the total respondents did not indicate their marital status. The age distribution shows that majority of the respondents (105; 43.2%) were between 41 and 50years old. This is followed by 31-40 years old (89; 36.6%) and 51years old and above 18-24years (26; 10.7%). Finally, age groups of 30 years and below jointly account for 9.5% of the total respondents. Table 2 also shows that 121 (49.8%) of the

respondents have first degree (HND/B.Sc/B.Eng Degree). Respondents with master's qualification account for 48.1% while 5 (2.1%) of the total respondents have PhD as their highest educational qualification. It can be inferred that the respondents are well educated and knowledgeable in giving acceptable responses to the questions asked.

DESCRIPTIVE STATISTICS AND CORRELATION ANALYSES

Mean, standard deviation and Pearson correlation coefficients were computed on the data for all the variables in the study. The results are shown in Table 3:

Table 3: Mean, standard deviation & Pearson correlation coefficients

Variables	SAFS	SAFP	SAFC	SPERF
Safety Supervision (SAFS)	1			
Safety Promotion (SAFP)	-0.284*	1		
Safety Commitment (SAFC)	-0.224*	0.322*	1	
Safety Performance (SPERF)	-0.414*	0.501*	0.453*	1
Mean	3.323	3.715	3.658	3.214
Standard Deviation	0.832	0.549	0.691	0.697

Key: N = 243; * = P < 5%.

Table 3 shows the Pearson's correlation coefficients between the constructs. According to Bryman and Cramer (1997), "the Pearson's correlation coefficient (r) should not exceed 0.80; otherwise, the independent variables that show a relationship above 0.80 may be suspected of having multi-collinearity". The results in Table 3 show that all the correlation coefficients are below 0.80, hence, ruling out any form of multi-collinearity in the model. Table 3 shows that safety performance is significantly related to Safety Supervision (r = -0.414, p < 0.05), Safety Promotion (r = 0.501, p <

0.05), and Safety Commitment (r = 0.453, p < 0.05). The mean and standard deviation values of the variables are: Safety Supervision (\bar{X} = 3.323, SD = 0.832), Safety Promotion (\bar{X} = 3.715, SD = 0.549), Safety Commitment (\bar{X} = 3.658, SD = 0.691) and Safety performance (\bar{X} = 3.214, SD = 0.697).

ESTIMATION OF RESEARCH MODEL

This contains the estimation of the relationship between safety climate constructs and safety performance. The results are shown in Table 4:



Table 4: Regression model of safety climate and performance

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.272	0.353		3.602	0.000
Safety Supervision (SAFS)	-0.212	0.044	-0.254	-4.817	0.000
Safety Promotion (SAFP)	0.427	0.069	0.337	6.207	0.000
Safety Commitment (SAFC)	0.290	0.054	0.287	5.389	0.000

$R^2 = 0.404$; Adj. $R^2 = 0.396$; F-statistic = 53.921; Prob (F-statistic) = 0.000; DW-Statistic = 1.991
 Dependent variable = Safety Performance

Table 4 show that Safety Supervision ($\beta = -0.212$, $t = -4.817$); Safety Promotion ($\beta = 0.427$, $t = 6.207$); and Safety Commitment ($\beta = 0.290$, $t = 5.389$) are significantly related to safety performance. The R^2 is 0.404. The result implies that safety climate variables (safety supervision, safety promotion, and safety commitment) jointly explained 40.4% of the changes in safety performance. The adjusted R^2 is computed as 0.396. It can be deduced from the results that safety climate variables considerably explain safety performance. The F-Statistic is 53.921 with a probability value of less than 1% (0.000). The result implies that the goodness of fit of the model is appropriate. Therefore, such a model is of high-quality for guiding in policy implication. The value of the Durbin Watson is 1.991. The result further confirms the absence of multi-collinearity in the estimated research model.

DISCUSSION OF FINDINGS

Firstly, this study found that safety supervision does significantly impact on safety performance of selected oil and gas firms operating in Nigeria. This research outcome is supported by the work of Kvalheim and Dalh (2016) that found that safety supervision significantly influences safety compliance and performance. Effective safety supervision is expected to play a critical role in enhancing performance. Supervision is generally measured by evaluating employees' satisfaction with supervision or their assessment of the supervisors' attitude and behaviour towards safety issues. As found by Zohar (2010), the safety climate in the workplace is determined by the perception of employees towards the kind of behaviour anticipated, encouraged and rewarded. As a result of this, supervisors or management play a critical role in communicating and setting safety behaviour standards. Yang (2010) empirically established that supervisors positively determine the safety climate among workers by expressing safety concerns, disseminating safety policies and reward safe behaviour in the workplace. If effective supervisory

platforms are created for workers to fully take part in safety activities and programmes, they will acquire new skills and knowledge. Effective supervision in safety programmes will assist in realizing the benefits of higher performance; and obtain a sense of accomplishment by solving safety-related problems in the workplace (Zhang, 2000).

Secondly, the study found that there is a significant relationship between safety promotion and safety performance of selected oil and gas firms operating in Nigeria. Safety promotion is fundamental to promoting a safe workplace. To improve organisation performance, the safety promotion programme should incorporate all efforts jointly reached by modifying structures, environment (physical, social, technological, political, economic and organisational) and employees' attitudes and behaviours toward safety matters in the workplace. One of the ways of evaluating safety promotion in the workplace as found by Vinodkumar and Bhasi (2010) is by employing items related to identifying safe-conduct as a positive factor for promotion; compensate employees for reporting hazards, create advertency among workers through programmes such as safety week celebrations and promoting healthy competition among workers to report acts and conditions that are not safe as well as encouraging workers to report safety matters. Safety promotion that will result in better performance in the organisation should include rewarding employees for disclosing safety hazards by giving them cash or other forms of recognition; celebrating safety week and other safety promotional activities; creating safety consciousness among the employees; and creating room for wholesome competition among employees to identify and report conditions and acts that are not safe in the workplace, amongst others.

Finally, the study found that a significant relationship exists between safety commitment and safety performance of selected oil and gas firms operating in Nigeria. This finding is consistent with the outcome of the work of Hong, Ramayah and Subramaniam (2018) that found that the visibility



and support of top management is a major determinant for the successful implementation of safety practices and in promoting business efficiency and effectiveness. White (2018) add credence to this by asserting that safety consciousness must be entrenched throughout organisation, and it must start at the top with the chief executive or equivalent.

Chapman and Hyland (1997) advocate that top management plays a critical role in transforming the environment of the organisations by providing leadership supports and creating platforms for continuous interactions among the organisational members. In a similar vein, Jurburg *et al.* (2017) observed that quality plans should be actively developed by top management to achieve business goals and objectives; disseminate the philosophy of the company to the employees and engage them in safety activities and advancement to motivate employees to achieve results and ensure that available resources are prudently used for employee education and training.

CONCLUSION AND RECOMMENDATIONS

The focus of this study was to empirically establish the relationship between safety climate and organizational performance in the Nigerian oil and gas industry. The safety climate constructs examined include safety supervision, safety promotion, and safety commitment. Based on the results of the empirical analyses, the study concludes that safety climate constructs such as safety supervision, safety promotion, and safety commitment significantly impact safety performance.

Based on the findings of this study, the following recommendations are suggested:

- i. Management of oil and gas firms should encourage employees to provide suggestions and ideas for improving performance in safety-related issues. The involvement of the employees will help in changing unconstructive attitudes and make them more dedicated to achieving organizational success.
- ii. The significant relationship between safety climate constructs such as safety supervision, safety promotion, and safety commitment and safety performance is an indication for management to strengthen these variables to guarantee a sustained improvement in the organisation's outcomes.
- iii. The study recommends that an effective safety climate can be sustained by applying the appropriate leadership practices, promote a healthy safety system and reward the safety commitment of workers.

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WORKPLACE POLITICS AND EMPLOYEE PERFORMANCE IN THE TELECOMMUNICATION INDUSTRY IN RIVERS STATE

Rotimi Akinnuoye¹, B. Chima Onuoha²

¹Doctoral Student University of Port Harcourt Business School, Port Harcourt, Rivers State

²Department of Management, University of Port, Harcourt Choba. Rivers State Nigeria

ABSTRACT

The purpose of this research is to investigate the relationship between workplace politics and employee performance of telecommunication firms in Rivers State. The study used descriptive survey design in structured questionnaire to collect data from 400 employees of telecom firms.

A total of 4 hypotheses were proposed and statistically tested with Spearman's Rank Correlation Coefficient. Results revealed that the promotional policy has a positive and weak correlation with employee productivity. It was further revealed that favouritism has a positive and significant correlation with turnover intention. In conclusion, promotional policy in a highly tensed political arrangement tends to reduce employee productivity and at the same time, increase turnover intention that telecom telecom firms who want to improve employee performance should have a standard procedure promoting employees irrespective of the individual involved. This will help improve employee productivity. They should also ensure level playground for all qualified employees that are due for promotion to avoid high employee turnover, which may affect possibility of achieving performance.

KEYWORDS: Workplace Politics, Promotional Policy, Turnover Intention.

INTRODUCTION

Increasingly, the last 20 years has showcased unprecedented growth in the telecommunication industry, especially with the privatization of Nigeria Telecommunication Limited (NITEL) in 2007, and the subsequent emergence of privately owned telecommunication companies, otherwise known as Global System for Mobile Communication (GSM) such as MTN, Globacom, Airtel, 9Mobile, etc. According to Nigerian Communications Commission (NCC, 2019), by the end of 2018, telecoms contributed revenue of over 77.42% to the ICT sub-sector Gross Domestic Product (GDP) and 9.46% to national GDP. It was also reported that the deregulation of the sector gave rise to an increase in active subscription, which grew from 400,000 lines in 2001 to 145.3 million lines in May 2017, resulting in a tele-density of 0.4% and 103.82% in both years respectively (NCC, 2019). Tele-density measures the percentage number of active telephone connections for every one hundred persons living within an area.

In view of the above, it is arguably most likely that this progress in the industry is traced to the innovations and organizational structure among players in a bid to remain relevant and achieve

business performance. In this light, the extent of employees of telecom firms interaction and communication for both individual and organizational interest dictates the overall survival of the organization (Sulaimon, Emmanuel & Bolanle, 2016). Therefore, the tendency to influence decisions and activities of the organization towards an employee or a group of employees is referred to as workplace politics. Politics in organization is inevitable; and has a significant impact on employee job involvement (Gull & Zaidi, 2012). Undoubtedly, human resources management cannot free from politicking among employees of different background, ethnicity, education and disposition to activities of common interest. According to Ogwuche (2014), it is almost impracticable to have unrestricted politics in organization because they are social bodies where employees make efforts individually and/or collectively for the purpose of acquiring resources, power, and influence activities to get benefits and serve their self-interests. Both individuals and groups may engage in office politics which can be highly destructive, as people focus on personal gains at the expense of the organizational goals (Attah, 2016). Karen (2014) expressed that workplace politics is the



pursuit of individual agenda and self-interest in an organization without regard to their effect on the organizations efforts to achieve its goals and objectives. Workplace politics represent deceitful behaviour of employees toward the work environment for personal interest which may not be in harmony with group and organizational objectives and subsequently may have effect on employee job performance (Bryson, Freeman, Lucifora, Pellizzari & Perotin (2011).

Politics involves human element and the relationship that come out of it is political which should be managed and handled with care, sincerity and maturity before escalating out of control (Krietner & Kinicki 2004). Because employee attitude towards work is largely determined by their perceptions of workplace politics, therefore, it is imperative for management to effectively handle varying power influences in order to reduce employee turnover and dissatisfaction. In organization, political behaviour is measures by employee’s observations on activities that are political, and this may have a negative or positive outcome (Al-Qatawneh, 2014). One of the major issues identified by many scholars is bad political behavior or maneuvering, which negatively affects employee performance due to conflict, hatred, rancour that emanates from unfriendly work environment. The implication is that it results to lower productivity in the work place if not managed efficiently. According to Cacciattolo (2014), problem of workplace politics may include unqualified employees in a strategic position, wrong decision making, waste of resources of organization, fraud and problem of sustainability. Unqualified employee may get appointed to hold a strategic

position of an organization provided he/she understands the devious behaviour to get it. This will have great effect on the decision making of an organization such as effective use of available resources and other noneconomic decisions. The result of wrong decision may include fraud or misappropriation, waste of resources and retardation of organizational development (Aronow, 2004).

Though, the above issues have been prevalent in several organizational contexts, work environment, industries, and even geographical locations; as confirmed by extant studies (Bryson et al., 2011; Gull & Zaidi, 2012; Ogwuche, 2014). However, it may not be out of point to mention that issues of this nature may vary or perhaps not found when examined elsewhere. It was against this backdrop; the research was undertaken to investigate whether the identified issues are applicable to the telecommunication industry. Therefore, this research was embarked upon to empirically unravel the relationship between workplace politics and employee performance as it relates to the telecommunication industry Rivers State.

MODEL SPECIFICATION AND OPERATIONAL FRAMEWORK

In this research, workplace politics is the independent variable with dimensions such as promotional policy and favouritism; while the dependent variable is employee performance, and was measured with employee productivity and turnover intentions. Premised on these variables, the research is expressed in the functional relationship below:

EP = $f(WP)$	-----Model 1
EP = EC, TI	----- Model 2
WP = PP, F	-----Model 3
EC, TI = $f(PP, F)$	-----Model 4

Where:

- EP = Employee Performance
- CG = Workplace Politics
- EP = Employee Productivity
- TI = Turnover Intention
- PP = Promotional Policy
- F = Favouritism

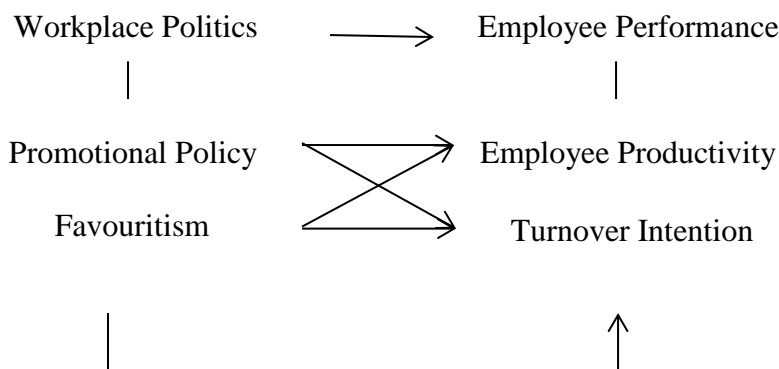


Fig 1: Operational Framework of the study

Source: Research Desk; as adopted from Bryson, Freeman, Lucifora, Pellizzari & Perotin 2011.

Based on the above operational framework, the following hypotheses were formulated:

Ho₁: There is no significant relationship between promotional policy and employee commitment of telecom firms in Rivers State.

Ho₂: There is no significant relationship between promotional policy and turnover intention of telecom firms in Rivers State.

Ho₃: There is no significant relationship between favouritism and employee commitment of telecom firms in Rivers State.

Ho₄: There is no significant relationship between favouritism and employee commitment of telecom firms in Rivers State.

LITERATURE REVIEW Theoretical Framework

The theory upon which this research was anchored is the Equity Theory (ET) promulgated by Stacy Adams in 1963. The ET emphasizes on employees' perceptions on fair and equal treatment in terms of general work conditions compared to other organizations. According to Jones & George (2003) ET is a theory of motivation that mainly premised on employee's perceptions of the fairness of workers work outcomes relative to, or in proportion to their work inputs. Luddy (2005) opined that ET proposes that employees have a strong desire to maintain stability between what they see their inputs or contributions to be connected to predictable rewards. Anuradha (2012) noted that ET focuses on distributive and procedural justice. As a way of conceptualization, distributive justice entails the identified equity of the amount, rewards and allocation of rewards among employees. The theory states that where employees identify discrepancies between the rewards they received and their efforts, those set of employees may likely be pushed to reduce their performance. On the part of Aziri (2011), ET suggests that workers are interested in

maintaining equal treatment in their relationships with organizations. Fairness and justice are determined by comparison based on the rate of employee's outputs and inputs. To Aziri (2011) outputs are pay, benefits, recognition and timeoff while inputs are employees experience, commitment, work efforts, etc.

In view of the foregoing, it is crucial to mention that ET is quite suitable for this research, given its emphasis on the relationship between employees' work input and their subsequent remuneration level. Specifically, from the context of this study, some employees may not get a fair share of their work efforts especially in organization with strong political presence. In this regard, those who know or have a strong connection to the powers-that-be, are most likely going to benefit more in terms of promotion and other incentives. Hence, the suitability of the theory.

CONCEPT OF WORKPLACE POLITICS

According to Aronow (2004), the concept of workplace politics came into organizational behaviour literature in 1983 by Robbins, Hellrigel, solcum & Woodman. Hence, plethora of definitions have been extended in this regard, Nwizia, Ojiabo & Alagah, (2017) defined workplace politics as actions that are inconsistent and conflicting with established organizational norms which are implemented to encourage personal interest, and are taken without regard for organizational goals. Nihat, Samet & Ozgur (2016) defined workplace politics as the application of power to get results that are either not approved by the workplace or organization or use tools that are also not approved by the organization. In addition, Cacciattolo (2014) defined workplace politics as informal, parochial, typically divisive and illegitimate behavior that is aimed at displacing legitimate power in different ways. Workplace politics is also seen as a social influence process in



which some group of employees strategically align to maximize self-interest. They are those actions that are not officially approved by an organization taken to influence others to meet one's personal goals. In consensus, these definitions agree that workplace politics is a set of social-influencing processes, which are experienced within an organization in order to prevent short-or long-term individual benefits.

EMPLOYEE PERFORMANCE

The performance of the organization can be enhanced by employing the right employees in the organization (Davidson, 2003). Employee performance is related with the abilities to generate new ideas and use this ability to build relations and processes of work (De Jong & Den Hartog, 2007). Employees who are adequately empowered are efficient and high performing, and are more responsible to the success of the organization (Armstrong & Murlis, 2004). Employee performance reflects the extent to which they contribute to the success of the organization. It has been argued that a lot factors influence employee performance (Bodla & Danish, 2010). Most likely, the outcome of employee performance is satisfaction, commitment, productivity, etc. However, it has been suggested by Boerner, Eisenbeiss & Griesser (2007) that employee capacities can be increased or decrease depending on the level of workplace politics.

EMPLOYEE PRODUCTIVITY

Employee performance largely depends on several factors; however, can be measured with productivity. Employee who possesses unique skills, competencies, and experience, have the ability to deliver high productivity (Wright, 2004). It has been debated that improving productivity is one of the fundamental objectives of several organizations. This is in line with several efforts by management to enhance employee productivity as this will lead to organizational profitability (Sharma & Sharma, 2014). The authors were also of the view that higher productivity tends to maximize organizational competitive advantage through cost reduction and improvement in quality of output.

Agnes (2009), were of the view that productivity is the quantity of work that is achieved within a period of time by means of the factors of production. The author further mentioned that productivity is a measure of performance that encompasses both efficiency and effectiveness. It is the correlation that exists between the quantity of inputs and outputs from a clearly defined process. Wright (2004), opined that productivity is an indication of how efficient essential resources are utilized to attain specific goals in terms of quantity and quality within a given time frame.

TURNOVER INTENTION

Turnover among the employees is one of the biggest challenges for any organization and have far lasting effects. It has been seen as a serious issue especially in the field of human resources management (Hassan, 2014). Wu X, Polsaram P (2011) added that Employee turnover become a major concern for many organizations nowadays and high employee turnover have a devastating effect on a company, especially if the lost employees are high performers. Turnover intention of employees refers the likelihood of an employee to leave the current job he/she are doing (Ngamkroeckjoti, Ounprechavanit & Kijboonchoo, 2012). Many organizations, irrespective of its location, size or nature of business, have always had a serious concern about employees' turnover intention (Long, Thean, Ismail & Jusoh, 2012). Turnover can be classified as voluntary and involuntary turnover. The former is when an employee leaves his or her job and the organization willingly. The latter refers the decision of management to force the employee to leave the organization.

For telecom firms, the turnover of employees entails the waste of investment in the selection and training of personnel. Besides, the high rate of employee turnover of a service provider adversely affects the motivation of existing personnel; increases the workload and makes work planning difficult. Thus, the resignation of skilled staff, who are considered as experts on the job, is an important issue that has a negative impact on the efficiency, effectiveness and general performance of the firm (Kaya & Abdioğlu, 2010).

WORKPLACE POLITICS AND EMPLOYEE PERFORMANCE

Plethora of studies have investigated the relationship between workplace politics and employee performance. Mensah, (2016) investigated the relationship among perceived organizational politics, organizational commitment and organizational citizenship behavior among 2 selected public sector organizations in Accra. Correlational research design was adopted in collecting data from 160 participants from the Ghana Standards Authority. Findings revealed that there is a negative relationship between employee's perceived organizational politics and organizational commitment. There is also negative relationship was also found between perceived organizational politics and organizational citizenship behaviour and a positive relationship between organizational commitment and organizational citizenship behavior. The study however did not find any relationship between the dimensions of Perceived organizational politics and commitment. According to previous studies,



organizational politics has a negative association with organizational outcomes, like intention to quit, stress, organizational citizenship behaviors, and job satisfaction (Perrewé, Rosen, & Maslach, 2012). In another research, Sowmya and Panchanatham (2011) examined the impact of politics on 30 employees' behavior in banking industry. According to the study, organizational politics negatively influences employees as it can affect negligent behavior and turnover intentions, and these were because of influence of variables such as job involvement and job satisfaction on organizational politics.

PROMOTIONAL POLICY AND EMPLOYEE PERFORMANCE

According to Ogwuche (2014), promotion decisions have consistently been found to be one of the most political actions in organizations. The opportunity for promotion or advancement encourages people to compete for limited resources and try to positively influence the decision outcome. Employees' productivity is reduced in organization where staff perceive an unfavorable promotion policy formulated and implemented. Promotion policies mean the way to which employees in an organization behave politically on policies formulation and implementation. In all organizations, evaluation of employees is a strong basis of promotion policies. Gull & Zaidi (2012) supported that promotion policy is how the organization acts and behave politically because of their policies. Promotional opportunities are given to employees that give extra assistance and indicate an interest in manager's personal curiosity. Wan, Mustapha & Zakaria (2013) noted that employees that perceived promotion decisions as fair are more likely to be committed to the job, experience satisfaction, perform effectively and efficiently, having minimum intention to leave the organization.

Many studies have investigated the association between promotion and employee performance. Olorunleke (2015) described organizational politics as improper approaches of achieving supremacy through unmerited channels. Promotional activities largely impact on employees' job satisfaction because it stimulates and fuel negative reactions. When employees perceive politics in how salary increase and payment are allocated to workers, their feeling about work environment will change dramatically. Politics in salary decision and promotion policies will reduce the level of employee satisfaction. It was revealed that promotional policy has a positive and significant relationship with employee performance. It was also revealed that politically-motivated promotional policy had a positive and significant relationship with turnover intention. It was however against this background the following hypotheses were formulated:

Ho₁: There is no significant relationship between promotional policy and employee productivity of telecom firms in Rivers State.

Ho₂: There is no significant relationship between promotional policy and turnover intention of telecom firms in Rivers State.

FAVOURITISM AND EMPLOYEE PERFORMANCE

The dictionary by Brockhouse & Efron (2010) defined favouritism as the state and social life appear more often than not as to be passionate patronage of specific individual employees and their appointment to the superior positions despite their having neither capabilities nor experiences necessary for such duties. Therefore, a favourite is an employee being in confidence of his chief and affecting his/her solutions to move up the career ladder thanks to a sense of having been chosen. The term favouritism to be closely intertwined with such notion as nepotism and cronyism (Komlev, 2006). The given definitions imply that favouritism and nepotism take place in such cases where a patron vested with power pushes forward a favourite or nepotic to move up the career ladder irrespective their experience, knowledge, services and advances. Ceylan & Demircan, (2002) Examined the association between favouritism and employee turnover in the banking sector. The authors surveyed 400 senior staff banks in the UK. Findings showed that favouritism has a positive and strong correlation with turnover intention. Ngamkroeckjoti et al. (2012) investigated the effect of favouritism on employee performance and turnover intention. Result indicated that favouritism has a weak effect on employee performance, and a strong correlation turnover intention. Based on the above postulates, we propose the following hypotheses:

Ho₃: There is no significant relationship between favouritism and employee productivity of telecom firms in Rivers State.

Ho₄: There is no significant relationship between favouritism and turnover intention of telecom firms in Rivers State.

METHODOLOGY

This research used cross-sectional survey type of quasi-experimental design due to the geographical concentration of the study's subjects and the inability of the researcher to have a good control over research elements as human behaviour can only be observed, not manipulated. The population of this research consists of employees of GSM service providers in. According to the Human Resource Department of the Corporate Headquarters of the 4 popular telecom operators revealed that MTN has a total number of 600 employees, AIRTEL has 550, GLO has 700, and 9MOBILE has 300 respectively. Focusing only on the permanent staffs implies that in all, the total



population of this study is 2,150. Given the above population figure, the corresponding sample size is 400 with the help of Taro Yamen formula. It is however important to state that the research adopted convenient sampling technique in selecting sample elements used.

In addition, two main sources of data were used- primary and secondary sources. While the former was sourced with the help of questionnaire, the latter was obtained from journal articles, credible internet publications, textbooks, etc. More so, the research instrument was evaluated through expert

checking for content, therefore, a pilot study was conducted to pre-test the questionnaire. To determine the reliability of the research instrument, Cronbach's Alpha tests were carried out. Lastly, the research adopted a combination of descriptive and inferential statistical tools in analysing data. In terms of descriptive statistical, the research used charts, tables, averages (means and standard deviation), percentages, etc; on the other hand, inferential statistics such as Spearman's Rank Correlation Coefficient was used, with the help of SPSS application (version 21.0), in testing hypotheses.

DATA ANALYSIS AND DISCUSSIONS

Table 1 Questionnaire Distribution and Retrieval

Questionnaire	Frequency	Percent (%)
Administered Copies	400	100.0
Returned Copies	376	94
Not returned Copies	24	6
Returned & usable Copies	366	91

Source: SPSS Output, 2021.

Table 1 indicated that a total 400 copies of questionnaire were administered; however, 376 representing 94% were returned. More so, 24 copies

were not returned, but 366 representing 91% were both returned and usable.

Table 2 Results of Reliability Test

Variables	Cronbach's Alpha
Promotional Policy	0.810
Favouritism	0.899
Employee Productivity	0.809
Turnover Intention	0.843

Source: SPSS Output, 2021.

From the table above, all variables in the research instrument have showed signs of reliability, since all test results are more than the standard of 0.700 (70%).

TESTING OF HYPOTHESES

Hypothesis One

Ho₁: There is no significant relationship between promotional policy and employee productivity of telecom firms in Rivers State.

Table 3: Correlation Analysis between Promotional Policy and Employee Productivity Correlations

		Promotional Policy	Employee Productivity
Spearman's rho	Promotional Policy	Correlation Coefficient	1.000
		Sig. (2-tailed)	.07
		N	366
	Employee Productivity	Correlation Coefficient	.343**
		Sig. (2-tailed)	.07
		N	366

** . Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS Output, 2021.



Decision: The above table indicates a coefficient and probability value of 0.343 and 0.07. Since the PV which is $0.07 > 0.05$, we accept the null hypothesis. Which means that there is a positive but weak relationship between promotional policy and employee productivity of telecom firms in Rivers State.

Hypothesis Two

Ho₂: There is no significant relationship between promotional policy and turnover intention of telecom firms in Rivers State.

Table 4: Correlation Analysis Between Promotional Policy and Turnover Intention
Correlations

			Promotional Policy	Turnover Intention
Spearman's rho	Promotional Policy	Correlation Coefficient	1.000	.894**
		Sig. (2-tailed)	.	.06
		N	366	366
	Turnover Intention	Correlation Coefficient	.894**	1.000
		Sig. (2-tailed)	.06	.
		N	366	366

** . Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS Output, 2021.

Decision: The above table indicates a coefficient and probability value of 0.894 and 0.06. Since the PV which is $0.06 > 0.05$, we reject the null hypothesis. Which means that there is a positive and significant relationship between promotional policy and turnover intention of telecom firms in Rivers State.

Hypothesis Three

Ho₃: There is no significant relationship between favouritism and employee productivity of telecom firms in Rivers State.

Table 4.5 Correlation Analysis Between Favouritism and Employee Productivity
Correlations

			Favouritism	Employee Productivity
Spearman's rho	Favouritism	Correlation Coefficient	1.000	.440**
		Sig. (2-tailed)	.	.08
		N	366	366
	Employee Productivity	Correlation Coefficient	.440**	1.000
		Sig. (2-tailed)	.08	.
		N	366	366

** . Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS Output, 2021.

Decision: The above table indicates a coefficient and probability value of 0.440 and 0.08. Since the PV which is $0.08 > 0.05$, we accept the null hypothesis. Which entails that there is a positive and weak relationship between favouritism and employee productivity of telecom firms in Rivers State.

Hypothesis Four

Ho₄: There is no significant relationship between favouritism and employee productivity of telecom firms in Rivers State.



Table 4.5 Correlation Analysis Between Favouritism and Turnover Intention
Correlations

			Favouritism	Turnover Intention
Spearman's rho	Favouritism	Correlation Coefficient	1.000	.879**
		Sig. (2-tailed)	.	.01
		N	366	366
	Turnover Intention	Correlation Coefficient	.879**	1.000
		Sig. (2-tailed)	.01	.
		N	366	366

** . Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS Output, 2021.

Decision: The above table indicates a coefficient and probability value of 0.879 and 0.01. Since the PV which is $0.01 < 0.05$, we reject the null hypothesis. Which entails that there is a positive and significant relationship between favouritism and turnover intention of telecom firms in Rivers State.

DISCUSSION OF FINDINGS

Ho₁ was set out to ascertain the relationship between promotional policy and employee productivity of telecom firms in Rivers State. The hypothesis was tested using Spearman's Rank Correlation Coefficient and result revealed a rho value of 0.343. Therefore, while the null hypothesis was accepted, this revealed a positive and weak association between promotional policy and employee productivity. By way of comparing this finding to previous ones, Mustapha & Zakaria (2013) noted that employees that perceived promotion decisions as fair are more likely to be committed to the job, experience satisfaction, perform effectively and efficiently, having minimum intention to leave the organization.

Ho₂ aimed at examining the relationship between promotional policy and turnover intention. Result showed a rho value of 0.894. Our analysis revealed a positive and significant relationship between promotional policy and turnover intention. of telecom firms in Rivers State. Accordingly, the null hypothesis was rejected, and subsequently, the alternate hypothesis accepted. This finding corroborates with the argument of Olorunleke (2015) when the authore described organizational politics as improper approaches of achieving supremacy through unmerited channels. Promotional activities largely impact on employees' job satisfaction because it stimulates and fuel negative reactions.

Ho₃ investigated whether favouritism in a workplace politics setting, has a significant relationship with employee productivity. Result revealed a rho value of 0.440. Consequently, the null hypothesis was accepted, which confirmed that favouritiam has a

positive and weak relationship productivity. Therefore, comparing this finding; Ceylan & Demircan, (2002) Examined the association between favouritism and employee turnover in the banking sector. The authors surveyed 400 senior staff banks in the UK. Findings showed that favouritism has a positive and strong correlation with turnover intention.

Ho₃ examined the relationship between favouritism and employee productivity. Result revealed that favouritism has a positive and significant ($\rho=0.879$) relationship with productivity. This result was in contrary view with the finding of Ngamkroekjoti et al. (2012), as the author investigated the effect of favouritism on employee performance and turnover intention. Result indicated that favouritism has a weak effect on employee performance, and a strong correlation turnover intention.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

The phrase "man is a political animal", as propounded by Karl Max; may not be out of place as the instrument of power will always be applied in organizations, institutions, groups, etc. Hence, the idea that employees or staff of organizations and/or institutions strive for the achievement of a common goal or objective may not be achievable in a high politicallymotivated organizational settings. The combination of different groups of people and plurality of culture, training, background and education will have great influence on the relationship in a workplace. These traits will in no small measures determine the sharing formular of benefits in the workplace. In this regard, and because organization is bound to fill strategic positions that are vacant, in which more than one person will be qualified for the roles, therefore, selection procedure and process will be greatly influence by organizational political gladiators in the workplace.



This research revealed that promotional policy in a highly tensed political arrangement tends to reduce employee productivity and at the same time, increase turnover intention. This is due to strong influence by those who knows the “powers that be” in the area of organization planning, decision making and leadership quality in the workplace, as well as the performance and productivity of organization.

Again, the aspect of favouritism has been confirmed to be a dangerous culture in many organizations: particularly organizations in the telecom industry. Favouritism in organizations has the potential of crippling organizational core values and give way for employee turnover.

Based on the above, it is recommended that telecom firms who want to improve employee performance should have a standard procedure promoting employees irrespective of the individual involved. They should also have a laid down rule in filling vacant positions, either by selection or by election, with explicit requirements for those positions. Also, they should imbibe the idea of outsourcing certain activities in order to avoid compromises.

More so, strategies or mechanism should be in place for managing conflict or disagreement that may arise in the process of promoting employees. Conflict is inevitable, but its management will have great influence on employee performance and development. Telecom operators should ensure level playground for all qualified employees that are due for promotion to avoid rancour.

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A STUDY IN SIVACHARYA YOGA ON THE INFLUENCE OF SCORPIO LAGNA

P Valsala¹, Sri Prathyangira Swamy²

¹Research Scholar, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies,
Chennai, India

²Director & HoD, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai,
India

ABSTRACT

Astrology is an excellent mathematical method of calculating the future of the country and the horoscope through the planets, zodiac signs and stars, to determine future events and to predict future events. Astrology and spirituality are closely related. There is no doubt that astrology helps us a great deal in protecting ourselves from the evils that befall us and in bringing us to the Lord. Lagna, Zodiac, Star, Yoga are predicted when one is born with the movements of the planets. Indian astrology is calculated based on the rotation of the moon. Indian astrology predicts 27 star clusters in our sky with the Moon passing by. The profession he does is predicted by putting the 10th house in one's favor. Predicting the 2nd house of Tanasthana, the 11th sin of profit and the strength of the 10th, 2nd, 11th sinners, it is said that the fortune-telling business is progressing and getting rich. The great work that can give peace of mind and happiness. Gurus, also known as Sivacharya's, do a wonderful job of cultivating godliness in the minds of others by reciting the Vedic mantras they have learned. It is also their divine profession. Sivacharya advice and counsel can bring about positive changes in the minds of the devotees who come to tell their grievances to God and help them to forget their sorrows and worries and bring peace of mind and happiness.

KEYWORDS - Sivacharya, Ragu, Ketu

I. INTRODUCTION

Gurus, also known as Sivacharyas, do a wonderful job of cultivating godliness in the minds of the priests by reciting the Vedic mantras they have learned to others. This is their deity. His advice and counsel can make a positive difference in the minds of the devotees who come to tell God their grievances and help them to forget their sorrows and worries and bring peace of mind and happiness. The Sivacharyas have been serving the Lord with peace of mind since time immemorial, the work of 'Sivacharyas' as their clan and optional profession. They have been teaching the scriptures and Sivagama rituals to others from an early age and preparing them for the work of Sivacharya. After a period of time the Vedic mantras and Sivagama worship are taught in a special way in the Vedic school and are developed into excellent Sivacharyas. In the early days, the teacher would listen to all the scriptures and Sivagama methods through Sivacharya and record them in his mind. Later he was taught the Vedic and Sivagama methods of writing with his fingers in the sand and with a stylus in the palm grove. Everyone from the king to the common citizen went in search of the teacher's place of work and gave him

assignments and educated him by imprinting in his mind what he had taught.

The work of Sivacharya is greatly desired by the Adi Saiva devotees. It is a great work that can give peace of mind and happiness. These Sivacharyas are the ones who follow the Vedic mantras and the Sivagama system regularly. The Sivacharyas are very diligent in their devotion to God and spirituality and are very important in guiding people to practice spirituality.

The purpose of this study is to examine the horoscopes of the Sivacharyas born in all the 12 signs from Aries to Pisces and to confirm through the following 5 rules that the Sun, Guru and Ketu planets are definitely affected in the 1st, 9th and 10th sins. The same is studied and my research topic is confirmed. Of these, the horoscopes of those born in Leo, Sagittarius, Pisces, etc., have proved to be the most suitable for Sivacharya's work.

Astrology is an excellent mathematical method of calculating the future of the country and the horoscope through the planets, zodiac signs and stars, to determine future events and to predict future events. All the beauty, glory and majesty of the deities are reflected in the growth and perpetuation of the spiritual norm. Numerous texts such as



Thevaram, Thiruvasakam, Tirupukal, Kandapuram, and rare epics such as the Ramayana and the Mahabharata are expressions of spirituality in our Hindu religion. These Hindu texts make the glory of Hinduism known to the world. Religions such as Jainism, Veganism, Vaishnavism, and Buddhism appeared in ancient times. According to their religion, six daily pujas were performed for the Lord. These were promoted by the kings of the time in all sorts of forms of gold, material, and grants. We know that the lands were also given to the temple and grew spiritually. This was continued by the Sivacharyas through their lineage. Its ethics have been unwavering.

The Sivacharya profession is much loved by the Adi Saiva devotees. A great work that can give peace of mind and happiness. Gurus, also known as Sivacharya's, do a wonderful job of cultivating godliness in the minds of others by reciting the Vedic mantras they have learned. It is also their divine profession. Sivacharya advice and counsel can bring about positive changes in the minds of the devotees who come to tell their grievances to God and help them to forget their sorrows and worries and bring peace of mind and happiness. Gurus, also known as Sivacharyas, do a wonderful job of cultivating godliness in the minds of the priests by reciting the Vedic mantras they have learned to others. This is their deity. His advice and counsel can make a positive difference in the minds of the devotees who come to tell God their grievances and help them to forget their sorrows and worries and bring peace of mind and happiness.

II. STUDY HYPOTHESIS

The planets Sun, Guru and Ketu in the horoscopes determine the position to perform the divine mission of Sivacharya. Although there are various works in the field of charities, the work of the Sivacharyas working in the temples is to be examined in this study.

The sun gives the leadership position of Sivacharyar to do charity to the Lord and as the Guru is the intellectual, it gives yoga, knowledge and wisdom for the work of Sivacharya. Scriptural education for Sivacharya's work imparts the knowledge of education, the virtue of Sivacharya's work after education, and the Guru's wisdom for Sivacharya's work. Similarly, the ninth sin of Bhakti, Dharma, also contributes to the practice of Sivacharya.

V. SIVACHARYA'S HOROSCOPE TABLES

Example Horoscope : 01

Date of Birth	: 14.03.1979	Time of Birth	: 22.30 PM
Place of Birth	: Nagapattinam	Lagna	: Scorpio
Signs	: Virgo	Star	: Uthraphalguni - 4
Dasa Bhukthi	: Sun Dasa 00 Years 04 Month 20 Days		

The aim of the study is to establish and confirm the guesswork rules for Sivacharyas' work, and to confirm that the influence of the Sun, Guru and Ketu on the horoscopes of the Sivacharyas, who are the ninth and tenth sins, and the planets for Sivacharyas to serve as Sivacharyas.

Astrology is the science of predicting one's life. Mathematics is the basis of this. Each of the 9 planets in the zodiac gives birth to certain forces that are responsible for their motions and for the causality and sinfulness of the respective planets to the life of the creatures according to their power. Pros mathematics is the study of all these and every aspect of mathematics. Man is said to be controlled by his inheritance and growing circumstances. But astrology is said to be controlled by the planetary positions at the time of his birth. These planets are the basic forces of our life. These are all associated with the star, the zodiac, and houses.

III. ASPECTS IN SIVACHARYA HOROSCOPES

1. Position of Sun, Jupiter and Ketu planets in Sivacharya horoscopes.
2. Sun, Jupiter, Ketu contact in 1st, 9th, 10th houses.
3. Correlation between Sun, Guru, Ketu.
4. Rules for setting up Sivacharyar mission.
5. Relation of Sun, Jupiter, Ketu to the work of Sivacharya.
6. The connection between the 9th house and the work of Sivacharya.

IV. RULES IN SIVACHARYA HOROSCOPE

Here mentioned the collected, compiled, analyzed and researched the horoscopes of Sivacharya's in horoscope table.

The following rules were taken from the study:

1. Sun, Jupiter and Ketu planets conjunction with 1st, 9th, 10th houses
2. Sun, Jupiter and Ketu planets aspecting with 9th house.
3. Sun, Jupiter and Ketu planets in 9th house.
4. Sun, Jupiter and Ketu in their padas.
5. Sun, Jupiter and Ketu planets aspects on 9th lord.



MERCURY			
SUN MARS KETU	RASI		JUPITER
VENUS			RAGU SATURN
	LAGNA		MOON

MOON MARS		KETU	VENUS SUN
	NAVAMSA		LAGNA
			JUPITER SATURN
	MERCURY RAGU		

Rules applied in horoscope table:

- Based on Rule 1: Sun planet conjunction with 9th house Lord Moon.
- Based on Rule 3: Jupiter planet in 9th house.
- Based on Rule 4: Sun in their Jupiter padas and Ketu in their Jupiter padas.
- 9th Lord connection with Sun.

Example Horoscope : 02

Date of Birth : 07.07.1991
 Place of Birth : Villupuram
 Signs : Aries
 Dasa Bhukthi : Venus Dasa 08 Years 09 Month 08 Days
 Time of Birth : 04.27 PM
 Lagna : Scorpio
 Star : Bharani - 3

	MOON		SUN KETU
	RASI		MERCURY JUPITER
SATURN			MARS VENUS
RAGU	LAGNA		

	SUN MARS SATURN	KETU VENUS	
	NAVAMSA		
JUPITER LAGNA			
	RAGU	MERCURY MOON	

Rules applied in horoscope table:

- Based on Rule 1: Ketu planet conjunction with 10th house Lord Sun.
- Based on Rule 3: Jupiter planet in 9th house.
- Based on Rule 4: Sun in their Jupiter padas.
- Based on Rule 5: Ketu planet 3th aspects on 9th lord Moon.
- 9th Lord Connection with Sun.



Example Horoscope: 03

Date of Birth	: 15.03.1948	Time of Birth	: 12.05 AM
Place of Birth	: Vaniyampadi	Lagna	: Scorpio
Signs	: Virgo	Star	: Hastha - 3
Dasa Bhukthi	: Moon Dasa 03 Years 05 Month 04 Days		

SUN KETU			
VENUS MERCURY	RASI		
MARS			
JUPITER SATURN	LAGNA		RAGU MOON

	MERCURY		MOON JUPITER
	NAVAMSA		SUN MARS KETU
LAGNA RAGU			
	VENUS SATURN		

Rules applied in horoscope table:

- Based on Rule 1: Ketu planet conjunction with 10th house Lord Sun.
- Based on Rule 4: Sun in their Ketu padas and Jupiter in their ketu Padas.
- Based on Rule 5: Sun planet 7th aspects on 9th lord Moon.
- 10th Lord Connection with Ketu.

VI. CONCLUSION

The study, entitled “A Study In Sivacharya Yoga on the Influence of Scorpio Lagna”, was done to know more about the Sivacharya’s who contribute to the development of spirituality and devotion in the society and to help in further research.

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LITERATURE SURVEY OF SIVACHARYA'S YOGA IN ASTROLOGY BASED ON ARIES TO PIECES LAGNA

P Valsala¹, Sri Prathyangira Swamy²

¹Research Scholar, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

²Director & HoD, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

ABSTRACT

The Sivacharyas have been serving the Lord with peace of mind since time immemorial, the work of 'Sivacharyas' as their clan and optional profession. They have been teaching the scriptures and Sivagama rituals to others from an early age and preparing them for the work of Sivacharya. After a period of time the Vedic mantras and Sivagama worship are taught in a special way in the Vedic school and are developed into excellent Sivacharyas. In the early days, the teacher would listen to all the scriptures and Sivagama methods through Sivacharya and record them in his mind. Later he was taught the Vedic and Sivagama methods of writing with his fingers in the sand and with a stylus in the palm grove. Everyone from the king to the common citizen went in search of the teacher's place of work and gave him assignments and educated him by imprinting in his mind what he had taught. This was continued by the Sivacharyas through their lineage. Its ethics have been unwavering. Sivacharya advice and counsel can bring about positive changes in the minds of the devotees who come to tell their grievances to God and help them to forget their sorrows and worries and bring peace of mind and happiness.

KEYWORDS - Sivacharya, Ragu, Ketu

I. INTRODUCTION

The Sivagams praise the Sivacharyas as those who appeared directly from the five faces of Shiva. Kamikamam states that Sivacharyas who worship in Shiva temples must be over sixteen years of age and under seventy years of age. The Sivacharyas were Brahmins who studied the Vedas and the Agamas. Worshipers of Lord Shiva by Sivagama mantras are also known as Sivacharyas, with the profession of reciting the Vedas in general and Sivagama better. Sivacharya is also known as 'Andanar' as he possesses the profession of reading the scriptures after receiving the Upanayana. Since Sivacharya read Sivagama very well and stood by them, he himself has the right to receive the priesthood and thus the teaching status.

II. ASPECTS IN SIVACHARYA HOROSCOPES

1. Position of Sun, Jupiter and Ketu planets in Sivacharya horoscopes.
2. Sun, Jupiter, Ketu contact in 1st, 9th, 10th houses.

3. Correlation between Sun, Guru, Ketu.
4. Rules for setting up Sivacharyar mission.
5. Relation of Sun, Jupiter, Ketu to the work of Sivacharya.
6. The connection between the 9th house and the work of Sivacharya.

III. RULES IN SIVACHARYA HOROSCOPE

Here mentioned the collected, compiled, analyzed and researched the horoscopes of Sivacharya's in horoscope table.

The following rules were taken from the study:

1. Sun, Jupiter and Ketu planets conjunction with 1st, 9th, 10th houses
2. Sun, Jupiter and Ketu planets aspecting with 9th house.
3. Sun, Jupiter and Ketu planets in 9th house.
4. Sun, Jupiter and Ketu in their padas.
5. Sun, Jupiter and Ketu planets aspects on 9th lord.



IV. SIVACHARYA'S HOROSCOPE TABLES

Example Horoscope : 01 (Aries Lagna)

Date of Birth	: 11.09.1997	Time of Birth	: 08.30 PM
Place of Birth	: Coimbatore	Lagna	: Aries
Signs	: Sagittarius	Star	: Purva Ashadha - 1
Dasa Bhukthi	: Venus Dasa 18 Years 04 Month 13 Days		

SATURN	LAGNA		
KETU	RASI		
JUPITER		SUN MERCURY RAGU	
MOON		MARS VENUS	

	LAGNA	MARS KETU	MERCURY JUPITER
SATURN	NAVAMSA		
			MOON
	SUN VENUS RAGU		

Rules applied in horoscope table:
 Based on Rule 1: Ketu planet 3rd aspect with 9th house.
 Based on Rule 4: Ketu planet in the Jupiter planet pada.

Example Horoscope : 02 (Taurus Lagna)

Date of Birth	: 04.03.1994	Time of Birth	: 11.45 AM
Place of Birth	: Villupuram	Lagna	: Taurus
Signs	: Scorpio	Star	: Anuradha - 4
Dasa Bhukthi	: Saturn Dasa 03 Years 09 Month 26 Days		

VENUS		LAGNA KETU	
SUN MARS SATURN	RASI		
MERCURY			
	MOON RAGU	JUPITER	

SUN	JUPITER		LAGNA
KETU	NAVAMSA		VENUS
SATURN			RAGU
	MOON MARS		MERCURY

Rules applied in horoscope table:
 Based on Rule 1: Sun, planet conjunction with 9th, 10th houses lord.
 Based on Rule 4: Jupiter planet in the Jupiter planet pada.



Example Horoscope: 03 (Gemini Lagna)

Date of Birth : 15.03.1998 Time of Birth : 11.58 AM
 Place of Birth : Vellore Lagna : Gemini
 Signs : Virgo Star : Hasta - 4
 Dasa Bhukthi : Moon Dasa 00 Years 01 Month 17 Days

SUN			LAGNA
MERCURY			
MARS			
SATURN			
JUPITER	RASI		
KETU			
VENUS			RAGU
			MOON

		VENUS	
SATURN	NAVAMSA		MOON
KETU			SUN
JUPITER			RAGU
MERCURY	MARS	LAGNA	

Rules applied in horoscope table:

- Based on Rule 1: Sun planet conjunction with 1st house Lord Mercury.
- Based on Rule 3: Ketu and Jupiter planets in 9th house.
- Based on Rule 4: Jupiter planet in the Ketu planet pada.

Example Horoscope : 04 (Cancer Lagna)

Date of Birth : 01.05.1975 Time of Birth : 10.30 AM
 Place of Birth : Selam Lagna : Cancer
 Signs : Aquarius Star : Shatabhisha - 1
 Dasa Bhukthi : Ragu Dasa 15 Years 11 Month 03 Days

JUPITER		SUN	SATURN
		MERCURY	
		KETU	
MOON	RASI		LAGNA
			VENUS
	RAGU		

KETU		SATURN	
		SUN	
	NAVAMSA		VENUS
JUPITER			
LAGNA	MARS		RAGU
MOON			MERCURY

Rules applied in horoscope table:

- Based on Rule 1: Jupiter planet conjunction with 10th house.
- Based on Rule 2: Ketu planet aspecting with 9th house.



Based on Rule 3: Jupiter planet in 9th house.
 Based on Rule 4: Sun and Ketu in their padas.
 Based on Rule 5: Jupiter and Ketu planets aspects on 9th lord.

Example Horoscope: 05 (Leo Lagna)

Date of Birth : 07.12.1973 Time of Birth : 11.15 PM
 Place of Birth : Thirubuvanam Lagna : Leo
 Signs : Aries Star : Bharani - 2
 Dasa Bhukthi : Venus Dasa 10 Years 02 Month 00 Days

	MARS MOON		KETU SATURN
	RASI		
JUPITER VENUS			LAGNA
RAGU	SUN MERCURY		

		MARS JUPITER RAGU	LAGNA
VENUS	NAVAMSA		
SUN			MERCURY
SATURN	KETU		MOON

Rules applied in horoscope table:

Based on Rule 1: Jupiter planet conjunction with 10th house Lord Venus.
 Based on Rule 2: Ketu planet 3rd aspecting with 9th house.
 Based on Rule 5: Ketu 3rd aspects on 9th lord Mars.
 10th Lord connection with Jupiter.

Example Horoscope : 06 (Virgo Lagna)

Date of Birth : 11.11.1996 Time of Birth : 03.13 AM
 Place of Birth : Coimbatore Lagna : Virgo
 Signs : Libra Star : Visaka - 1
 Dasa Bhukthi : Jupiter Dasa 14 Years 01 Month 27 Days



KETU SATURN			
	RASI		
			MARS
JUPITER	MERCURY	SUN MOON	LAGNA VENUS RAGU

LAGNA	MOON RAGU	SUN	
	NAVAMSA		VENUS MERCURY MARS
		KETU JUPITER	SATURN

Rules applied in horoscope table:

- Based on Rule 1: Jupiter planet conjunction with 10th house lord Mercury.
- Based on Rule 2: Ketu planet 11th aspecting with 9th house.
- Based on Rule 4: Sun in their Jupiter padas.
- Based on Rule 5: Ketu planet 7th aspects on 9th lord Venus.
10th Lord connection with Jupiter.

Example Horoscope : 07 (Libra Lagna)

Date of Birth : 11.06.1986 Time of Birth : 04.25 PM
 Place of Birth : Thiruvannamalai Lagna : Libra
 Signs : Cancer Star : Pushyami - 2
 Dasa Bhukthi : Saturn Dasa 10 Years 06 Month 27 Days

	RAGU	SUN	MERCURY
JUPITER	RASI		MOON VENUS
MARS	SATURN	KETU LAGNA	

MERCURY		RAGU	JUPITER LAGNA
	NAVAMSA		VENUS
			SUN
MARS	KETU	SATURN	MOON

Rules applied in horoscope table:

- Based on Rule 2: Jupiter planet 5th aspecting with 9th house.
- Based on Rule 4: Jupiter in their Jupiter padas.
- Based on Rule 5: Jupiter planet 5th aspects on 9th lord Mercury.
9th Lord Connection with Jupiter.



Example Horoscope : 08 (Scorpio Lagna)

Date of Birth : 14.03.1979 Time of Birth : 22.30 PM
 Place of Birth : Nagapattinam Lagna : Scorpio
 Signs : Virgo Star : Uthraphalguni - 4
 Dasa Bhukthi : Sun Dasa 00 Years 04 Month 20 Days

MERCURY			
SUN MARS KETU	RASI		JUPITER
VENUS			RAGU SATURN
	LAGNA		MOON

MOON MARS		KETU	VENUS SUN
	NAVAMSA		LAGNA
			JUPITER SATURN
	MERCURY RAGU		

Rules applied in horoscope table:

- Based on Rule 1: Sun planet conjunction with 9th house Lord Moon.
- Based on Rule 3: Jupiter planet in 9th house.
- Based on Rule 4: Sun in their Jupiter padas and Ketu in their Jupiter padas.
9th Lord connection with Sun.

Example Horoscope : 09 (Sagittarius Lagna)

Date of Birth : 29.02.1980 Time of Birth : 02.32 AM
 Place of Birth : Namnadu Lagna : Sagittarius
 Signs : Cancer Star : Ashlesha - 3
 Dasa Bhukthi : Mercury Dasa 07 Years 07 Month 08 Days

VENUS			
SUN MERCURY KETU	RASI		MOON
			RAGU MARS JUPITER
LAGNA			SATURN

VENUS		RAGU	MERCURY
MOON SUN	NAVAMSA		MARS JUPITER
SATURN			LAGNA
	KETU		



Rules applied in horoscope table:

- Based on Rule 1: Jupiter planet conjunction with 10th house Lord Mercury.
 - Based on Rule 2: Sun planets aspecting with 9th house.
 - Based on Rule 3: Jupiter planet in 9th house.
 - Based on Rule 4: Jupiter in their Ketu padas.
 - Based on Rule 5: Jupiter planet 7th aspects on 9th lord Sun.
- 10th Lord connection with Ketu.

Example Horoscope : 10 (Capricorn Lagna)

Date of Birth	: 18.12.1975	Time of Birth	: 09.17 AM
Place of Birth	: Trichy	Lagna	: Capricorn
Signs	: Taurus	Star	: Mrigashiras - 1
Dasa Bhukthi	: Mars Dasa 05 Years 03 Month 18 Days		

JUPITER	KETU	MOON MARS	
RASI			SATURN
LAGNA			
SUN MERCURY		VENUS RAGU	

VENUS	LAGNA SUN	RAGU	
NAVAMSA		MERCURY	
		MOON	
JUPITER			
	KETU		MARS SATURN

Rules applied in horoscope table:

- Based on Rule 1: Sun planet conjunction with 9th house Lord Mercury.
 - Based on Rule 2: Jupiter planet aspecting with 9th house.
 - Based on Rule 4: Sun in their Ketu padas.
- 9th Lord connection with Sun.

Example Horoscope : 11 (Aquarius Lagna)

Date of Birth	: 15.05.1974	Time of Birth	: 01.15 AM
Place of Birth	: chennai	Lagna	: Aquarius
Signs	: Aquarius	Star	: Dhanishta - 4
Dasa Bhukthi	: Mars Dasa 00 Years 11 Month 17 Days		



VENUS		SUN MERCURY KETU	MARS SATURN
LAGNA MOON JUPITER	RASI		
	RAGU		

RAGU	MARS MERCURY JUPITER		
	NAVAMSA		
LAGNA SUN			
SATURN VENUS	MOON		KETU

Rules applied in horoscope table:

- Based on Rule 1: Jupiter planet conjunction with 10th house Lord Mars.
- Based on Rule 4: Sun in their Sun padas, Jupiter in their Jupiter padas.
- Based on Rule 5: Ketu planet 3th aspects on 9th lord Venus.
- 10th Lord connection with Jupiter.

Example Horoscope : 12 (Pieces Lagna)

Date of Birth	: 13.07.1977	Time of Birth	: 00.15 AM
Place of Birth	: Thiruchenkodu	Lagna	: Pieces
Signs	: Taurus	Star	: Rohini - 3
Dasa Bhukthi	: Moon Dasa 04 Years 08 Month 17 Days		

LAGNA KETU		VENUS MOON MARS JUPITER	SUN
	RASI		MERCURY SATURN
			RAGU

LAGNA	VENUS		MOON SUN
KETU	NAVAMSA		
SATURN MARS			RAGU
		MERCURY	JUPITER

Rules applied in horoscope table:

- Based on Rule 1: Sun planet conjunction with 9th house Lord Mars.
- Based on Rule 2: Jupiter planets aspecting with 9th house.
- Based on Rule 4: Sun in their Jupiter padas.
- Based on Rule 5: Ketu planet 11th aspects on 9th lord Mars.
- 9th Lord connection with Sun.



V. CONCLUSION

The study, entitled “Literature Survey Of Sivacharya's Yoga in Astrology Based on Aries to Pieces Lagna”, was done to know more about the Sivacharya's who contribute to the development of spirituality and devotion in the society and to help in further research.

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AN ASTROLOGICAL STUDY AND IMPACT OF CANCER LAGNA FOR YOGA FOR FOREIGN VISIT

A Rajaraman¹, Sri Prathyangira Swamy²

¹Research Scholar, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies,
Chennai, India

²Director & HoD, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai,
India

ABSTRACT

Going abroad was considered a great achievement and an active activity in the 1970s - 80s. It was considered an act performed only by the affluent. They only went abroad for higher studies and work. Due to the subsequent scientific development and technological development, going abroad has become a very simple thing. Indians got job opportunities abroad through computer and software. The growth of India's current computer industry has made it easier for all people to go abroad. Due to this the number of our people living abroad permanently is increasing exponentially. Income tax and foreign exchange are being levied on our people living abroad. The value of our country is enhanced by the knowledge and professionalism of our people. Our people follow the Indian culture and take it to spread the pride of our country all over the world. 'Yoga Going Abroad', this study has kept most of the people born in India with the idea of going abroad at least once in their life. It comes in many forms: higher education, medical education, marriage, work, career, travel, Women living with their husbands after marriage, the opportunity to go abroad for the delivery of a daughter or daughter-in-law living abroad, and for the care of grandchildren after childbirth.

KEYWORDS – Bhakyashtana, Bhakyathipathi, pada, Dasa, Buddhi.

I. INTRODUCTION

The purpose of this study is to study the benefits of those who have gone abroad and those who are living abroad permanently or temporary foreign visit and to explore who will be eligible for yoga abroad. Parents want their children to study better, get higher marks and thereby go abroad, earn cash and reach a higher level in life. Many are going abroad as a result of the industry. Women go abroad to live with their husbands after marriage. Going abroad for business also occurs. There will be an environment where parents will go abroad for the delivery of their children and for the care of grandchildren. It is also being explored whether there is a system of planets in his horoscope to get them yoga to go abroad.

II. ASTROLOGY - DESCRIPTION

The history of any art is the basic nail root. In ancient times humans were first seen as the basis

III. ASPECTS IN YOGA FOR FOREIGN VISIT HOROSCOPES

1. Yoga going abroad occurs when the planets Rahu, Saturn and the Moon sit in 9th – 12th places.

of omens and then began to worship the planets as deities due to the effects of the rages of nature. They then began to observe the changes in nature caused by the planets and the consequences. As a result of such research, the planets Sun, Mars and Saturn were divided into evil planets and the planets Moon, Mercury, Guru and Venus were divided into virtuous planets. Based on this they have been doing continuous study of people for centuries.

The effects of planetary influences on this planet were first seen only by nations and kings, and then gradually benefited an individual. The result was a gradual breakdown of the sky, galaxy, and sign. Astrology first developed in the Sumerians, Mesopotamians, Babylonians, Chaldeans, Egyptians, and Greeks. The Chaldeans were the creators of the fruit system, which included stars, planets, and the twelve signs. Historians believe that the oldest fortune-teller was written on April 29, 410 BC.

Overseas yoga is caused by the sitting of the planets Rahu, Saturn, and the Moon, which can provide overseas yoga in Bhakyashtana(9), overseas, distant, and sleepy places (12).



2. 1 - 9 - 12 house lords get the essence of Rahu, Saturn and the moon star, so the yoga of going abroad occurs.
3. 1- 9 - 12 obtaining the essence of their star pada causes yoga to go abroad.
4. Yoga going abroad occurs as the movable sign, water sign or air sign is 9th – 12th places to the Lagna target.

As the average person is unable to stay in one place like a snake, the 9 – 12th sign of the average person will go abroad, resulting in yoga going abroad. Water Sign gives to the person an unstable state like stagnant water, so 9th – 12th water sign will have the opportunity to go abroad. As the air sign becomes unstable in one place like an airborne cargo, the air sign becomes 9th – 12th place as air sign will giving it a chance to go abroad.

5. 1 - 9 – 12th Lords change within themselves and the yoga of going abroad occurs.

Lagna house lord, Bhakyaathipathi, Foreign sign house Lord Change within themselves are those who are spiritually driven to go abroad.

IV. RULES IN FOREIGN VISIT HOROSCOPE

Rule No. 1:

1 - 9 - 12th houses in Rahu, Saturn, the moon is going to get the yoga going abroad.

Rule No. 2:

Rahu, Saturn and Moon in 1 - 9 - 12th house Lord padas.

Rule No. 3:

Lagna Lord in 9th - 12th house Lord padas.

Rule No. 4:

9th and 12th houses to the Lagna is to go abroad as a Movable Sign, Water Sign, or Air Sign.

Rule No. 5:

1st - 9th - 12th house lords change within themselves to get yoga going abroad.

V. HOROSCOPE TABLES

Example Horoscope : 01

Date of Birth	: 21.12.2003	Time of Birth	: 07.50 PM
Place of Birth	: Erode	Lagna	: Cancer
Signs	: Scorpio	Star	: Anuraadha - 2
Dasa Bhukthi	: Saturn Dasa 09 Years 08 Month 04 Days		
Foreign Visit	: Febuary 2020 – London – Job related Travel		
Time of Foreign Visit	: Mercury Dasa – Sun Buddhi – Rahu Antharam 18.01.2020 – 05.03.2020		

MARS	RAGU		SATURN
	RASI		LAGNA
VENUS			JUPITER
SUN MERCURY	MOON	KETU	

SATURN		SUN KETU	
VENUS	NAVAMSA		LAGNA
	RAGU JUPITER		MARS MOON MERCURY

Rules applied in horoscope table:

- Rule 1: 12th house in Saturn is going to get the yoga going abroad.
- Rule 2: Lagna Lord Moon in Saturn pada.
- Rule 4: 9th house to the Lagna is to go abroad as Water Sign.
- 12th Lord Connection with Saturn.



Example Horoscope : 02

Date of Birth : 20.04.1990 Time of Birth : 01.35 PM
 Place of Birth : Chengalpattu Lagna : Cancer
 Signs : Aquarius Star : Dhanishta - 3
 Dasa Bhukthi : Mars Dasa 03 Years 01 Month 13 Days
 Foreign Visit : 15.11.2013 – America – After Marriage
 Time of Foreign Visit : Jupiter Dasa – Saturn Buddhi – Saturn Antharam – Saturn Sukshman
 22.07.2013 – 15.12.2013

	SUN MERCURY		JUPITER
MOON VENUS MARS	<u>RASI</u>		LAGNA KETU
RAGU SATURN			

	VENUS	SUN	RAGU
LAGNA	<u>NAVAMSA</u>		
JUPITER SATURN			
KETU	MERCURY MARS	MOON	

Rules applied in horoscope table:

- Rule 2: 9th Lord Jupiter in Rahu pada.
- Rule 4: 9th to the Lagna is to go abroad as a Water Sign.
- Rule 5: 9th house lord Jupiter in 12th house to get yoga going abroad.
- 9th Lord Connection with Rahu.

Example Horoscope : 03

Date of Birth : 06.06.1982 Time of Birth : 09.20 AM
 Place of Birth : Tiruvarur Lagna : Cancer
 Signs : Scorpio Star : Anuraadha - 4
 Dasa Bhukthi : Saturn Dasa 00 Years 05 Month 30 Days
 Foreign Visit : June 2014 – London – Tour Travel
 Time of Foreign Visit : Venus Dasa – Rahu Buddhi – Rahu Antharam
 06.02.2014 – 17.07.2014



	VENUS	SUN MERCURY	RAGU
	<u>RASI</u>		LAGNA
KETU	MOON	JUPITER	MARS SATURN

	RAGU MARS	MERCURY	
	<u>NAVAMSA</u>		SUN SATURN
			VENUS
LAGNA JUPITER	MOON	KETU	

Rules applied in horoscope table:

- Rule 1: 12th house in Rahu is going to get the yoga going abroad.
- Rule 2: Lagna Lord Moon in Saturn pada,
- Rule 4: 9th house to the Lagna is to go abroad as a Water Sign.
- 12th Lord Connection with Rahu.

VI. CONCLUSION

The hypothesis of the study is to confirm that the influence of the planets Rahu, Saturn and the Moon, which can give yoga abroad, is in the horoscopes of those who receive yoga abroad, and the influence of the karmic signs of Lagna, Nine and Twelfth house, which give yoga abroad.

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A STATISTICAL ANALYSIS OF YOGA FOR FOREIGN VISIT BASED ON VIRGO LAGNA

A Rajaraman¹, Sri Prathyangira Swamy²

¹Research Scholar, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

²Director & HoD, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

ABSTRACT

The purpose of this study is to study the benefits of those who have gone abroad and those who are living abroad permanently or temporary foreign visit and to explore who will be eligible for yoga abroad. Going abroad was considered a great achievement and an active activity in the 1970s - 80s. It was considered an act performed only by the affluent. They only went abroad for higher studies and work. Due to the subsequent scientific development and technological development, going abroad has become a very simple thing. Indians got job opportunities abroad through computer and software. The growth of India's current computer industry has made it easier for all people to go abroad. Due to this the number of our people living abroad permanently is increasing exponentially. Income tax and foreign exchange are being levied on our people living abroad. The value of our country is enhanced by the knowledge and professionalism of our people.

KEYWORDS – Bhakyashtana, Bhakyathipathi, Pada, Dasa, Buddhi.

I. INTRODUCTION

As times change so do the beliefs, traditions, superstitions, Dogmas, Taboos. Time it was when an Indian who crossed the seas had to do penance for having committed the "sin" going to the country of the mlechas.

But these days, particularly after the impact of the industrial revolution and technology, going abroad, particularly to the western countries, is looked upon as a piece of good luck mainly because the West has come to be regarded as the land of opportunities. Indians going abroad or foreigners coming to India are in millions. We have in our collections hundreds of horoscopes of Indians going abroad and foreigners coming to India. Broadly, not exhaustively, they fall into the following categories:

- (a) Those who go abroad in connection with job, professionally.
- (b) Those who go abroad to settle down there permanently after taking up citizenship there. The green card in U.S .A. is a valuable possession of many Indians.
- (d) Those who go abroad for medical treatment.
- (c) Many Indian girls and even some boys go abroad after their marriage with someone abroad of Indian or foreign origin.

II. SETTLEMENT IN ABROAD - SNAP SHOT PREDICTION

The inhibition Hindus had in earlier decades about going to foreign countries after crossing the "seven seas" has vanished. A common question being asked of astrologers these days relates to settlement abroad. A snap shot method for giving quick predictions is given below with illustrations. However, like other snap shot methods, it has its limitations. This rule has, however, been widely tested and generally found to be accurate.

The parameters are,

1. Fourth house/lord, its affliction from the lagna.
2. The role of Rahu/Ketu and its connection with the 4th house and/or the 4th lord.
3. It has been observed that whenever fourth house/lord is afflicted or fourth lord is ill placed (6, 8 & 12) in a horoscope, person leaves his native place to settle abroad.
4. If somehow or the other, Rahu/Ketu are also involved then residence abroad becomes almost a certainty.
5. Examine all these from the Moon and also in the Navamsha.



6. Examine all these from the Pada Lagna also.

III. ASPECTS IN YOGA FOR FOREIGN VISIT HOROSCOPE

1. Yoga going abroad occurs when the planets Rahu, Saturn and the Moon sit in 9th – 12th places.

Overseas yoga is caused by the sitting of the planets Rahu, Saturn, and the Moon, which can provide overseas yoga in Bhakyashtana(9), overseas, distant, and sleepy places (12).

2. 1 - 9 - 12 house lords get the essence of Rahu, Saturn and the moon star, so the yoga of going abroad occurs.

3. 1 - 9 - 12 obtaining the essence of their star pada causes yoga to go abroad.

4. Yoga going abroad occurs as the movable Sign, water Sign or air Sign is 9th – 12th places to the Lagna target.

As the average person is unable to stay in one place like a snake, the 9 – 12th sign of the average person will go abroad, resulting in yoga going abroad. Water Sign gives to the person an unstable state like stagnant water, so 9th – 12th Water Sign will have the opportunity to go abroad. As the Air Sign becomes unstable in one place like an airborne

cargo, the air Sign becomes 9th – 12th place as Air Sign will giving it a chance to go abroad.

5. 1 - 9 – 12th Lords change within themselves and the yoga of going abroad occurs.

Lagna house lord, Bhakyathipathi, Foreign Sign house Lord Change within themselves are those who are spiritually driven to go abroad.

IV. RULES IN FOREIGN VISIT HOROSCOPE

Rule No. 1:

1 - 9 - 12th houses in Rahu, Saturn, the moon is going to get the yoga going abroad.

Rule No. 2:

Rahu, Saturn and Moon in 1 - 9 - 12th house Lord padas.

Rule No. 3:

Lagna Lord in 9th - 12th house Lord padas.

Rule No. 4:

9th and 12th houses to the Lagna is to go abroad as a Movable Sign, Water Sign, or Air Sign.

Rule No. 5:

1st - 9th - 12th house lords change within themselves to get yoga going abroad.

V. HOROSCOPE TABLES

Example Horoscope : 01

Date of Birth	: 16.08.1996	Time of Birth	: 08.45 AM
Place of Birth	: Vijayawada	Lagna	: Virgo
Signs	: Leo	Star	: Poorvaphalguni - 2
Dasa Bhukthi	: Venus Dasa 10 Years 05 Month 02 Days		
Foreign Visit	: 02.05.2017 – China – Job related Travel		
Time of Foreign Visit	: Moon Dasa – Saturn Buddhi – Saturn Antharam – Saturn Sukshman 19.04.2017 – 04.05.2017		

SATURN KETU			MARS VENUS
	<u>RASI</u>		SUN
			MOON MERCURY
JUPITER			LAGNA RAGU

SUN	LAGNA MARS	RAGU	
VENUS	<u>NAVAMSA</u>		JUPITER
			MERCURY KETU



Rules applied in horoscope table:

Rule 1: 12th house in Moon is going to get the yoga going abroad.

Rule 2: 9th Lord Venus in Rahu pada.

Rule 3: Lagna Lord Mercury in 9th house Lord Venus padas.

Rule 5: Lagna house lord Mercury in 12th house to get yoga going abroad.

12th Lord Connection with Moon.

Example Horoscope : 02

Date of Birth : 28.07.1989 Time of Birth : 09.50 AM
 Place of Birth : Kakkinada Lagna : Virgo
 Signs : Taurus Star : Rohini - 2
 Dasa Bhukthi : Moon Dasa 05 Years 09 Month 15 Days
 Foreign Visit : October 2013 – Washington – After Marriage
 Time of Foreign Visit : Rahu Dasa – Ketu Buddhi – Saturn Antharam
 07.08.2013 – 07.10.2013

		MOON	JUPITER
	<u>RASI</u>	SUN MERCURY	
RAGU		KETU VENUS MARS	
SATURN		LAGNA	

LAGNA	MARS KETU	MOON	
	<u>NAVAMSA</u>		VENUS
MERCURY			SATURN
	JUPITER	RAGU SUN	

Rules applied in horoscope table:

Rule 1: 9th house in Moon is going to get the yoga going abroad.

Rule 2: 12th Lord Sun in Saturn pada.

Rule 5: 9th house lord Venus in 12th house to get yoga going abroad.

9th Lord Connection with Moon.

Example Horoscope : 03

Date of Birth : 20.08.2013 Time of Birth : 09.30 AM
 Place of Birth : Mumbai Lagna : Virgo
 Signs : Capricorn Star : Shraavan - 4
 Dasa Bhukthi : Moon Dasa 01 Years 11 Month 06 Days
 Foreign Visit : 21.05.2014 – Muskat
 Time of Foreign Visit : Moon Dasa – Venus Buddhi – Jupiter Antharam
 (02.04.2014 – 21.06.2014)



	KETU		JUPITER
	<u>RASI</u>		MARS MERCURY
MOON			SUN
		SATURN RAGU	LAGNA VENUS

RAGU JUPITER MERCURY	SUN VENUS		LAGNA
	<u>NAVAMSA</u>		MOON MARS
SATURN			
			KETU

Rules applied in horoscope table:

Rule 2: 9th Lord Venus in Moon pada,

Rule 5: 9th house lord Venus in Lagna house to get yoga going abroad.

9th Lord Connection with Moon.

VI. CONCLUSION

The hypothesis of the study is to confirm that the influence of the planets Rahu, Saturn and the Moon, which can give yoga abroad, is in the horoscopes of those who receive yoga abroad, and the influence of the karmic signs of Lagna, Nine and Twelfth house, which give yoga abroad.

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AN IMPACT OF LAND AEROBICS AND WATER EXERCISE ON CARDIO VASCULAR ENDURANCE PERFORMANCE AMONG COLLEGE MEN STUDENTS

Dr. V. A. Manickam

*Assistant Professor, Department of Physical Education and Health Sciences,
Alagappa University, Karaikudi, -630 004, Tamilnadu, India.*

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ABSTRACT

The purpose of the study was to find out the Impact of Land Aerobics and Water Exercise on Cardio Respiratory Endurance Performance among college men Students. To attain the purpose Sixty (N=60) College men students were selected. The subjects were selected equally into three groups of 20 each namely; land aerobics group, water aerobics group and control group. Cardiovascular endurance was selected as dependent variable for this study and it was assessed by Cooper's 12 minutes run/walk test. The training was resisted to 12 weeks and the number of sessions was limited to 3 days per week. The data for pre and post intervention was taken. Independent 't' test showed significant differences (0.05 Level) in Cardiovascular endurance among the groups. Land Aerobics are superior than Water Aerobics in Cardiovascular endurance. The present study demonstrated that differences in Cardiovascular endurance among Land and Water Aerobic and Control group. Land Aerobic Exercise may have potential role of increasing Cardiovascular endurance.

KEYWORDS: *Land Aerobics, water Aerobics Cardiovascular endurance.*

INTRODUCTION

Sport pertains to any form of competitive physical activity or game that aims to use, maintain or improve physical ability and skills while providing enjoyment to participants and, in some cases, entertainment to spectators.^[2] Sports can, through casual or organized participation, improve one's physical health. Hundreds of sports exist, from those between single contestants, through to those with hundreds of simultaneous participants, either in teams or competing as individuals.

Training constitutes a basic concept in human resource development. It is concerned with developing a particular skill to a desired standard by instruction and practice. Training is a highly useful tool that can bring an employee into a position where they can do their job correctly, effectively, and conscientiously. Training is the act of increasing the knowledge and skill of an employee for doing a particular job.

All activities which are part of human behavior were subject to a long-term development. Let us take throwing, which is regarded a basic motor activity, as an example. In the deep past, throwing was necessary for feeding and defense. At present,

throwing has lost its importance as one of the above mentioned activities but it is involved in different sports to a great extent (e.g. athletics, handball, baseball, etc.). The task of a prehistoric hunter was to hit the target precisely to get food. The aim of a present-day athlete is to throw the javelin as far as possible. The result of the activity in both examples can be considered a performance. Performance is understood as an extent to which motor task is accomplished. With the prehistoric hunter, performance is evaluated dichotomically: hitting the target or missing and it is not restricted by any rules. In the case of the athlete, performance is evaluated following rules of the sports discipline which were set in advance, it is expressed by the length of the throw and is understood as a sports performance. An ability to achieve a given performance repeatedly is referred to as efficiency.

Sports training is understood as a process of systematic development of each component in dependence on the duration of preparation which leads to achieving maximum efficiency in senior age within the selected sports discipline.

Water fitness activity is an exercise that is performed in the water, which promotes and



enhances physical and mental fitness. Water fitness is among the most popular and widely prescribed fitness activities because it appears to be suitable for different groups: older, injured, and even healthy people (Benelli et al., 2004).

Water exercise programs had an enormous benefit in the improvement of physical fitness and are attributes for each physical fitness components (Barbosa et al., 2009). The density of water is approximately 800 times that of air, this has an important contribution to the energy cost of water exercise (Prampero, 1986).

Land-based fitness programs are those exercises which are performed as indoor and outdoor (on the ground) physical activities. They can refer to physical activities that carried various aerobic and anaerobic exercises. Both aerobic and anaerobic exercises are the most important to any workout and are the basis for a healthy lifestyle (<http://www.fitness>). Developing good conditioning programs based on the specific physiological demands of each sport is considered as a key factor (Balcilunas et al., 2006).

AIM OF THE STUDY

The aim of the study was to find out the Impact of Land Aerobics and Water Exercise on Cardio Respiratory Endurance Performance among college men Students.

OBJECTIVE OF THE STUDY

To determine the effectiveness of impact of Land Aerobics and Water Exercise on Cardio Respiratory Endurance Performance among college men Students.

HYPOTHESIS

There is significant improvement in increasing the level of cardiovascular endurance.

VARIABLES OF THE STUDY

Independent Variables

- Land Aerobics
- Water Aerobics

Dependent Variables

- Cardiovascular endurance

STUDY DESIGN

Pre and post-test experimental study, quasi experimental study design.

SAMPLE SIZE

Sixty (N=60) College men students, Land Aerobics n=20, Water Aerobics, n=20 & control group, n=20.

STUDY DURATION

- 12 weeks

TREATMENT DURATION

- 45 mins/day 3 days/week for 12 weeks

CRITERIA FOR SAMPLE SELECTION

Inclusive Criteria

- College men students age between: 18 to 21
- Gender: Male
- Willingness to participate.
- No serious medical problem.

Exclusive criteria

- Gender: Female
- Age below 18
- Not involved in sports and fitness training.
- Sever cardiac problems.

STATISTICAL ANALYSIS

The results of the independent 't'-test on the data obtained for Cardio vascular endurance of the subjects in the pre-test and post-test of the experimental groups and control group have been analyzed and presented in Table-1.

Table 1
Cardio Vascular Endurance in the Land Aerobics group, Water Aerobics group and Control group before and after interventions

Groups	Before Interventions	After Interventions	Differences	t- value
Cardiovascular Endurance (Scores in Meters)				
Land Aerobics group	2105.00	2535.00	430.00	15.81*
Water Aerobics group	2136.00	2347.00	211.00	6.20*
Control group	2128.50	2096.00	32.50	0.60

* Significant at 0.05 level.

The table value required for 0.05 level of significance with df 59 is 2.00.

A significant, positive impact on the measured variables was observed. The subjects increased in cardiovascular endurance 430.00 from

base line among Land Aerobics group and 211.00 in Water Aerobics group; however there was no statistical significance in the control group (32.50).

Cardiovascular endurance was altered by the treatments (cardiovascular endurance 't' is 15.81, 6.20).

The mean values of experimental groups and control group on Cardiovascular Endurance was graphically represented in the Fig.1.

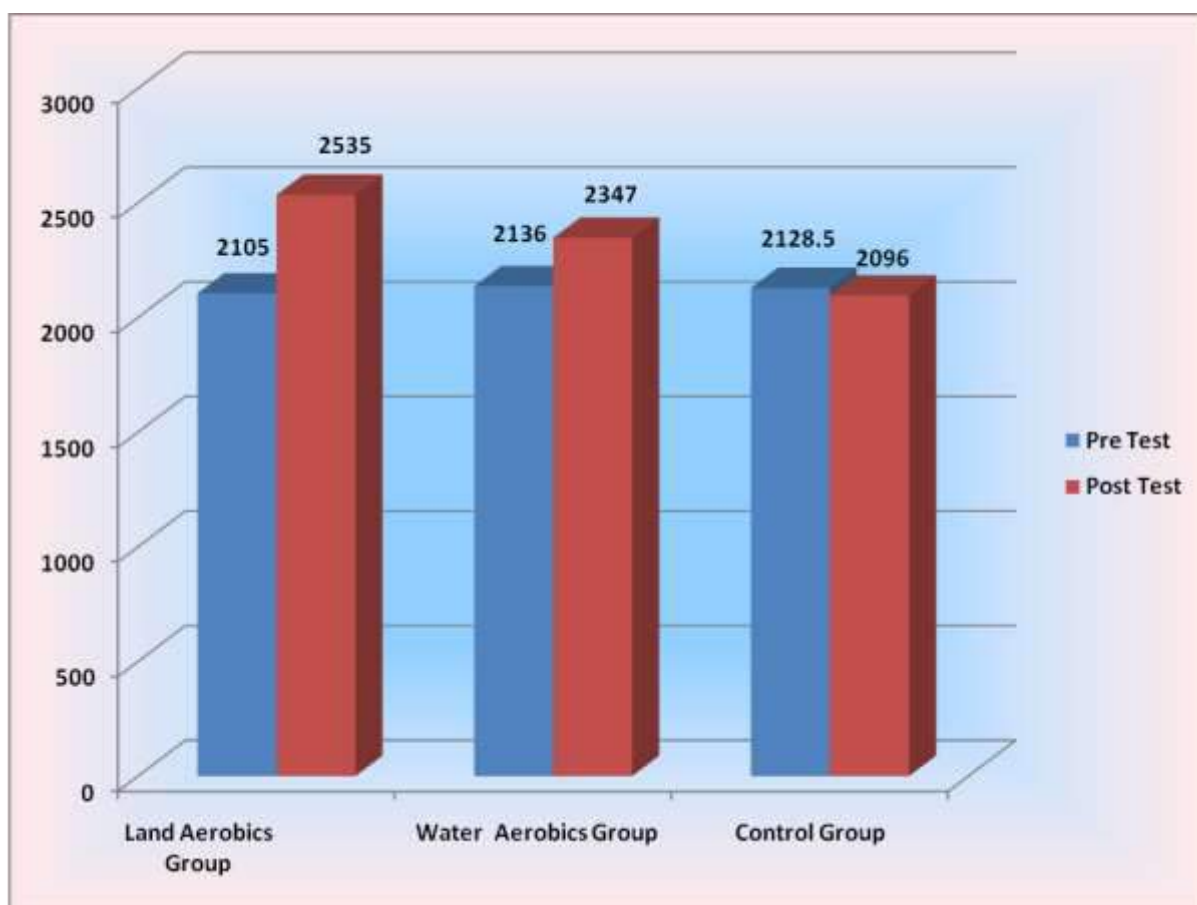


Fig.1 Bar Diagram showing the Pre and Post test mean values of Treatment groups and Control group on Cardiovascular Endurance

CONCLUSIONS

The present study reveals that the 12 weeks of land aerobics and water aerobics shown significant differences among the three groups with respect to cardiovascular endurance. Finally it is also concluded that the subjects land aerobics has shown greater improvement comparable to the subject shallow water aerobics and control group regard to cardiovascular endurance.

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THE EFFECT OF GOOD CORPORATE GOVERNANCE MECHANISM AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON TAX AVOIDANCE WITH COMPANY SIZE AS MODERATING VARIABLES

Hasian Purba

Accounting Study Program, Faculty of Economics and Business, Universitas Mercu Buana

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ABSTRACT

Taxes are the largest source of state revenue which functions as a source of funds intended for financing government expenditures and as a tool to regulate and implement policies in the social and economic fields and are used for the greatest welfare of the people. Therefore, corporate and individual taxpayers are expected to comply with their tax obligations voluntarily and comply with tax regulations. Taxpayer non-compliance can cause disruption to State finances. One of the ways of non-compliance is done by means of tax avoidance. The objectives of this study are as follows: 1) To find empirical evidence regarding the effect of independent boards of commissioners on tax avoidance; 2) Finding empirical evidence regarding the effect of the audit committee on tax avoidance; 3) Finding empirical evidence regarding the effect of audit quality on tax avoidance; 4) Finding empirical evidence regarding the effect of disclosure of corporate social responsibility on tax avoidance; 5) Finding empirical evidence regarding the extent to which firm size can moderate the relationship between independent boards of commissioners and tax avoidance; 6) Finding empirical evidence regarding the extent to which firm size can moderate the relationship between the audit committee and tax avoidance; 7) Finding empirical evidence regarding the extent to which firm size can moderate the relationship between audit quality and tax avoidance; and 8) Finding empirical evidence regarding the extent to which firm size can moderate the relationship between disclosure of corporate social responsibility and tax avoidance. This type of research used in this research is casual associative research (causal associative research).

The population in this study were all manufacturing companies listed on the Indonesia Stock Exchange for the 2015-2019 period. The sample selection was done by using purposive sampling method. The analytical method used to test the hypothesis is Moderated Regression Analysis (MRA). The results showed that: 1) The independent board variable has no effect on tax avoidance in a positive direction; 2) The audit committee variable has no effect on tax avoidance in a negative direction; 3) The audit quality variable has no effect on tax avoidance in a negative direction; 4) The variable of corporate social responsibility disclosure has a negative effect on tax avoidance; 5) The size of the company is able to moderate the relationship between the independent board of commissioners and tax avoidance in a negative direction; 6) The size of the company is unable to moderate the relationship between the audit committee and tax avoidance in a negative direction; 7) The size of the company is not able to moderate the relationship between audit quality and tax avoidance in a positive direction; and 8) Company size is able to moderate the relationship between disclosure of corporate social responsibility and tax avoidance in a negative direction.

KEYWORDS : *Corporate Social Responsibility, Good Corporate Governance, Company Size, Tax Avoidance*

INTRODUCTION

Taxes are the largest source of state revenue. Taxes collected by the State function as a source of funds intended for financing government expenditures and function as a tool to regulate and implement policies in the social and economic fields and are used for the greatest prosperity of the people. Therefore, corporate and individual taxpayers are expected to comply with their tax obligations voluntarily and comply with tax regulations. Taxpayer non-compliance can cause disruption to State finances. One of the ways of non-compliance is done by tax avoidance, namely legal tax avoidance efforts that do not violate taxation regulations by taxpayers by reducing the amount of tax owed by looking for weaknesses (Hutagoal, 2007 in Hasian, 2019).



According to Fitri & Tridahu (2015), the issue of tax avoidance is a complex and unique one. On the one hand it is permissible but on the other hand tax avoidance is undesirable. In Indonesia, various regulations have been made to prevent tax avoidance. One of them is related to transfer pricing, which is about the principle of fairness and prevalence in transactions between taxpayers and parties who have a special relationship (Perdirjen No.PER-43/PJ/ 2010, 2010 in Hasian, 2019).

Cases regarding tax avoidance that have been committed by well-known companies such as Apple Inc (2012) which hid US \$ 11 billion in revenue in countries that receive tax breaks include Virginia Island, Ireland and Luxembourg. So that the tax paid is small. Starbuck (2012) who makes financial statements appear to be losing money, namely by paying royalties for designs, recipes and logos to branches in the Netherlands. Paying very high interest debt, where the debt turns out to be used for coffee shop expansion in other countries. Purchasing raw materials from branches in Switzerland. Even though the delivery of goods is direct from the producing country and does not enter Switzerland. Internet search engine company in the United States (2011) The company posted revenue in the UK of 398 million pounds in 2011, but only paid 6 million pounds in taxes. The profits of the British branch company turned out to be transferred to branches in Ireland, the Netherlands and Bermuda. The Bermuda State is a tax haven country that does not collect corporate income tax. And other cases that reduce state revenue in the taxation sector (merdeka.com).

Corporate governance is a system or mechanism that regulates and controls the company to create value added for stockholders. Corporate governance began to be the subject of discussion in Indonesia in 1998 when the country was hit by a crisis. Many people are of the opinion that the duration of improvement in the economic sector at that time was due to the weak implementation of corporate governance in an entity or company. Finally, both the government and investors are really paying special attention to corporate governance. The implementation of corporate governance is expected to influence entities to behave professionally, transparently and efficiently and to optimize the company's managerial functions in every General Meeting of Shareholders (GMS) (Irawan and Aria, 2012).

Good corporate governance can affect tax avoidance. This has been proven empirically by previous researchers such as research conducted by Syeldila & Niki (2015), the results of their research show that the proportion of independent commissioners, audit quality, and audit committee has a negative and significant effect on tax avoidance. According to Arry (2017) in the Influence of Independent Commissioners, Audit Committees, and Audit Quality on Tax Avoidance, the results show that independent commissioners and audit quality have a positive effect on tax avoidance, the audit committee has no significant effect on tax avoidance.

Another factor that is predicted to cause corporate tax aggressiveness is Corporate Social Responsibility. Corporate Social Responsibility (CSR) is referred to as a sustainable business commitment that contributes to the economy through cooperation with interested parties and influences the surrounding environment and the general public to improve the quality of facilities and the survival of the local community and in general in useful ways, both for the business itself and for the wider community or for development (World Bank Group in Sutedi, 2015).

Several items of Corporate Social Responsibility are expenses that can be charged as deductible expenses, for example waste treatment costs, apprenticeship fees, scholarships and training, donations in the context of national disaster management, donations of educational facilities and others (Femitasari, 2014). So it cannot be denied that many companies carry out Corporate Social Responsibility activities as a form of reducing taxable income by implementing Corporate Social Responsibility which can be charged as a cost to reduce gross income.

The relationship between CSR and tax avoidance can be explained that CSR is a form of corporate responsibility to all stakeholders. Tax is a form of corporate social responsibility to stakeholders through the government. Thus, companies involved in tax avoidance are socially irresponsible (Lanis and Richardson, 2012), so that the company's decision to practice tax avoidance is also influenced by the decision to carry out CSR activities (Hidayat et al., 2016).

Hoi et al., (2013) examined the Public United State company in 2003-2009. As a result, companies with irresponsible CSR disclosure will aggressively engage in tax avoidance practices. Research conducted by Dharma and Noviar (2017) aims to test and provide empirical evidence of the effect of corporate social responsibility (CSR) and capital intensity on tax avoidance. The results show that companies that carry out higher CSR activities do not practice much tax avoidance as a form of socially responsible action.

The inconsistency of previous research results related to the influence of good corporate governance (GCG) and corporate social responsibility (CSR) on tax avoidance encourages the author to add company size as a moderating variable for the relationship between good corporate governance (GCG) and corporate social responsibility (CSR). tax avoidance, which later this moderating variable can strengthen or weaken the relationship between good corporate governance (GCG) and corporate social responsibility (CSR) with tax avoidance. The reason for researching manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the 2015-2019 period is because manufacturing companies have different financial characteristics from other companies, so they can cause bias in the results of research. This is due to government regulations that tend to



affect the ETR value of manufacturing companies so that it is different from other companies (Lanis and Richardson, 2012).

For reasons as mentioned above, this study intends to examine under the title: "The Effect of Good Corporate Governance Mechanisms and Disclosure of Corporate Social Responsibility on Tax Avoidance with Company Size as a Moderating Variable.

From the description of the research background above, the main issues that will be discussed in this study can be formulated, namely: 1) Does the independent board of commissioners have an effect on tax avoidance ?; 2) Does the audit committee have an effect on tax avoidance ?; 3) Does audit quality affect tax avoidance ?; 4) Does disclosure of corporate social responsibility affect tax avoidance ?; 5) Can the size of the company moderate the relationship between the independent board of commissioners and tax avoidance ?; 6) Can company size moderate the relationship between the audit committee and tax avoidance ?; 7) Can company size moderate the relationship between audit quality and tax avoidance ?; 8) Can company size moderate the relationship between disclosure of corporate social responsibility and tax avoidance?

LITERATURE REVIEW

Legitimacy Theory

According to Ahmad et al (2004 in Hasian, 2017), the theory of legitimacy is based on the notion of a social contract that is implied between social institutions and society. Legitimacy theory also explains that the practice of disclosing corporate responsibility must be implemented in such a way that the company's activities and performance can be accepted by the community. Ghozali and Chariri (2007 in Hasian, 2017) explain that in order to legitimize company activities in the eyes of the community, companies tend to use environmental-based performance and disclosure of environmental information.

Legitimacy theory is the theory most often used, especially when it comes to social and environmental accounting. Although there is still strong pessimism expressed by many researchers, this theory has been able to offer a real point of view regarding the recognition of a company voluntarily by the community.

Stakeholders Theory

The concept of corporate social responsibility has been known since the early 1970s, which is generally known as stakeholder theory which means as a collection of policies and practices related to stakeholders, values, compliance with legal provisions, community and environmental respect, and the commitment of the business world to contribute to sustainable development. Stakeholder theory begins with the assumption that value is explicitly and undeniably a part of business activities. (Freeman, et al., 2002 in Siti & Hasian, 2019).

Stakeholder theory says that a company is not an entity that only operates for its own interests but must provide benefits for its stakeholders. Thus, the existence of a company is strongly influenced by the support provided by stakeholders to the company (Ghozali and Chariri, 2007 in Hasian, 2019).

Agency theory

Agency theory or agency theory can be viewed as a contractual model between two or more people (parties), where one party is called an agent and the other is called a principal. The principal delegates responsibility for decision making to the agent, it can also be said that the principal gives the agent a mandate to carry out certain tasks in accordance with the agreed work contract. The powers and responsibilities of both the agent and principal are regulated in a work contract with mutual consent (Hasian, 2019).

Good Corporate Governance (GCG)

According to Keasy, corporate governance is a structure, process, culture and system to create successful operational conditions for an organization (Sunarto in Syukri and Chenny, 2018). Koesnohadi (in Syukri and Chenny, 2018) said that "Good corporate governance is a relationship among stake holders that is used to determine and control the strategic direction and performance of organization".

According to Tangkilisan (2003, in Angrum, 2016) good corporate governance (GCG) is a system and structure for managing a company with the aim of increasing company value and allocating it to various interested parties such as creditors, suppliers, business associations, consumers, workers, government and wide community. The same thing was also expressed by Sutedi (2011 in Hasian, 2019) GCG by definition is a system that regulates and controls a company to create value added for all shareholders (stakeholders). GCG can only be created if there is a balance between the interests of all parties and the interests of the company to achieve company goals (Khairandy and Malik, 2007 in Angrum, 2016).

From the above understanding, it can be concluded that Good Corporate governance is a system of corporate governance so that it can be better and can increase corporate value by promoting justice for all stakeholders, transparency regarding the condition of the company as part of the external environment. (Haris, 2008 in Syukri and Chenny, 2018)

The measurement of corporate governance in this study uses the following variables:



a. Independent Board of Commissioners

According to Puspitasari and Ernawati (2010 in Syukri and Chenny, 2018) independent commissioners are members of the board of commissioners who have no relationship related to finance, management, share ownership and / or family with other members of the board of commissioners, directors and / or controlling shareholders or other relationships. who is able to act independently. The board of commissioners plays an important role in corporate governance, because the company law concerns the company's legal affairs and responsibilities to the board of commissioners.

In a company, the board of commissioners represents the main internal mechanism in carrying out the control function of the principal and oversees the opportunistic behavior of management. The board of commissioners also acts as a representative for shareholders who functions to control and provide advice to the board of directors in implementing GCG. A dual board (two-tier) system is a system that a company uses in its internal organizational structure, which is better known as the board of commissioners and the board of directors.

The proportion of independent commissioners in this study is calculated using the ratio of independent commissioners divided by the total number of commissioners.

b. Audit Committee

The audit committee is a committee that is responsible for overseeing external audit and is the main contact between the auditor and the company (Hasian, 2019). The existence of an audit committee in a company is expected to provide views on issues related to financial policy, accounting and internal control of a company. In this study, the audit committee will be measured using a ratio, namely the number of audit committees outside the independent commissioners divided by the number of audit committees in the company.

c. Audit quality

Audit quality is all the possibilities that can occur when the auditor audits the client's financial statements and finds violations or errors that have occurred and reports them in the audited financial statements (Hasian, 2019). Transparency towards shareholders can be achieved by reporting matters related to taxation on the capital market and shareholders' meetings. Increased transparency towards shareholders in terms of taxes is increasingly being demanded by public authorities (Sartori, 2010 in Hasian, 2019). Due to the assumption that there are implications of tax aggressive behavior, their company is taking an aggressive position in terms of taxes and would have prevented such action if they had been in the previous year. Therefore, audit quality is measured using a dummy variable with a value of 1 if the financial statement audit is carried out by The Big Four Public Accounting Firm, namely Price Water House Cooper – PWC, Deloitte Touche Tohmatsu, KPMG, and Ernst & Young –E & Y, and a value of 0. if the financial statement audit is not carried out by The Big Four Public Accounting Firm.

Corporate Social Responsibility

Corporate Social Responsibility (CSR) is an action or concept carried out by a company (according to the company's capabilities) as a form of their responsibility towards the social or environment around the company (Rachmad, et al., 2011 in Ana & Hasian, 2020). Corporate Social Responsibility involves all relationships that occur in the company with all stakeholders including customers, or customers, employees, communities, owners or investors, government, and even levels of society. If a company manages its company's CSR well, then the company will get significant benefits and benefits in the form of company reputation, namely, in terms of recruitment, motivation and employee references as well as suggestions for building and maintaining cooperation.

The disclosure of corporate social responsibility is measured by a CSRI (corporate social responsibility index) proxy based on the CSR disclosure indicator based on the fourth generation Global Reporting Initiative (GRI) or called G4 with 91 CSR disclosure indexes. Information regarding Corporate Social Responsibility based on GRI 4 consists of 3 focus disclosures, namely social, economic, and environmental (Heryanto & Julianto, 2017).

CSR disclosure is carried out using the CSDI approach. This approach uses a dichotomy approach, in which each social responsibility item in the research instrument is given a value of 1 if it is disclosed, and a value of 0 if it is not disclosed (Haniffa et al., 2005 in Ana & Hasian, 2020). Furthermore, the scores of each item are added together to obtain the overall score for each company.

The CSDI calculation formula is as follows (Ana & Hasian, 2020):

$$CSDI_j = \frac{\sum X_{ij}}{n_j}$$

Keterangan :

CSDI_j = Company Corporate Social Disclosure Index j

N_j = The number of items to be disclosed, n_j = 91

X_{ij} = The number of known items gets a score of 1 if the item is unknown, 0 if the item has no known disclosure.



Tax avoidance

Tax Avoidance is a transaction scheme aimed at minimizing the tax burden by exploiting the loophole of a country's taxation provisions. According to Lim (2011 in Ana & Hasian, 2020) defines tax avoidance as tax savings that arise by utilizing taxation provisions that are carried out legally to minimize tax obligations.

Tax avoidance is a tax avoidance effort that is carried out legally and safely for taxpayers because it does not conflict with taxation provisions, where the methods and techniques used tend to take advantage of the weaknesses (gray area) contained in the tax laws and regulations themselves, to reduce the amount of tax owed (Pohan, 2013).

According to Dyreng et al. (2010 in Ana & Hasian, 2020) this variable is calculated using the cash effective tax rate (CETR), namely the payment of income tax divided by the profit before tax.

Company Size

The size of the company is the size of the company, a large, established company will have easy access to the capital market (Purnamasari & Fitria, 2015). Large companies pay more attention to the public so that they will be more careful in doing financial reporting, so that the impact is that these companies report their conditions more accurately. Peasnell, et. al (1998 in Bintara, 2019) shows a negative relationship between firm size and earnings management in the UK. It can be concluded that managers who lead larger companies have a smaller chance of manipulating profits than managers in small companies.

Song and Windram (2000 in Bintara, 2019) also investigated the relationship between firm size and the quality of financial reporting in the UK. The results found that company size has a significant relationship to the quality of financial reporting. This is supported by the tendency that large companies are able to hire better external auditors and to better implement internal controls in their accounting departments.

Chtourou, et. al (2001 in Bintara, 2019) examines the impact of firm size on earnings management in the United States. By grouping earnings management into three parts: high, medium, and low earnings management, they find that firm size has a negative effect on earnings management in all test groups. Larger companies have a smaller chance of doing earnings management than smaller companies.

The size of the company will be denoted by SIZE, and measured using the natural logarithm (ln) of total sales.

Previous Research Studies

Previous research that can support this research is Ginting (2016) in his research entitled "The Effect of Corporate Governance and Fiscal Loss Compensation on Tax Avoidance with Company Size as a Moderating Variable". The results showed that Partially Institutional Ownership and Fiscal Loss Compensation had a significant effect on Tax Avoidance, while Independent Commissioners had no significant effect on Tax Avoidance. Company size is unable to moderate (strengthen or weaken) the influence of Institutional Ownership, Independent Commissioners and Fiscal Loss Compensation on Tax Avoidance.

Rahmawati, et al (2016) in their research entitled "The Effect of Disclosure of Corporate Social Responsibility and Corporate Governance on Tax Avoidance (Studies in Manufacturing Companies Listed on the IDX 2012-2014)" provides evidence that the proportion of CSR and independent commissioners has a positive and significant effect. , managerial ownership, institutional ownership, have a negative and significant effect on tax avoidance, while the audit committee and the quality of external auditors do not have a significant effect on tax avoidance.

Arry (2017) in his research entitled "The Effect of Independent Commissioners, Audit Committees, and Audit Quality on Tax Avoidance" provides empirical evidence that independent commissioners and audit quality have a positive effect on tax avoidance, the audit committee has no significant effect on tax avoidance. . Simultaneously the independent commissioner, audit committee and audit quality have a significant effect on tax avoidance.

Fitria (2018) in her research entitled "The Influence of Institutional Ownership, Independent Commissioners, Executive Character and Size Against Tax Avoidance (Empirical Study of Trade Sector Issuers Listed on the IDX 2015-2019)" provides evidence that institutional ownership, Independent Commissioners, characteristics the executive has no significant effect on tax avoidance. Meanwhile, company size has a significant effect on tax avoidance.

Ningrum et al. (2018) in his research entitled "The Effect of Corporate Social Responsibility Disclosure on Tax Avoidance with Gender as a Moderation Variable (Empirical Study of Manufacturing Companies Listed on the Indonesia Stock Exchange in 2016)". The results of this study indicate that CSR disclosure has a negative effect on tax avoidance. Gender (the proportion of women on company boards) has strengthened the effect of CSR disclosure on tax avoidance practices.

Theoretical Framework

Based on the theoretical basis and several previous studies, the framework in this study can be shown by the following figure:

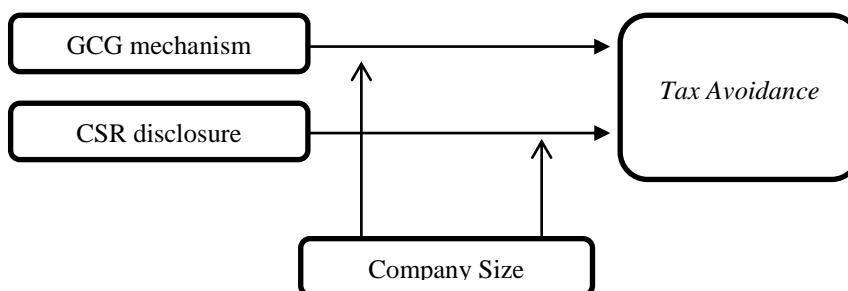


Figure 1.1 Research Model

Research Hypothesis

From the framework of thought above, the researcher draws a hypothesis as follows:

- Ha1 = Independent Board of Commissioners has a negative effect on Tax Avoidance
- Ha2 = Audit Committee has a negative effect on Tax Avoidance
- Ha3 = Audit quality has a negative effect on Tax Avoidance
- Ha4 = CSR disclosure has a negative effect on Tax Avoidance
- Ha5 = Company size can moderate the relationship between the Independent Commissioner and Tax Avoidance
- Ha6 = Company size can moderate the relationship between the Audit Committee and Tax Avoidance
- Ha7 = Company size can moderate the relationship between Audit Quality and Tax Avoidance
- Ha8 = Company size can moderate the relationship between CSR Disclosure and Tax Avoidance

RESEARCH METHODOLOGY

Types of research

This type of research used in this research is casual associative research (causal associative research). According to Sanusi (2011), associative-causal is research that looks for a relationship between two or more variables. The purpose of associative research is to find a relationship between one variable and another.

Operational Definition and Variable Measurement

The variables used in this study consisted of the dependent variable and the independent variable. The operational research variables can be summarized in table 1.1.

Table 1.1 Variable Operationalization

Jenis Variabel	Defenisi Operasional	Pengukuran	Skala
Dependent			
<i>Tax Avoidance</i>	Tax avoidance efforts are carried out legally and safely for taxpayers because they do not conflict with taxation provisions, where the methods and techniques used tend to take advantage of the weaknesses (gray area) contained in the tax laws and regulations themselves, to minimize the amount. the tax payable (Ana & Hasian, 2020)	<i>Cash Effective Tax Rate (CETR)</i>	Ratio
Independent			
Independent Board of Commissioners	Members of the board of commissioners who do not have financial, management, share ownership and/or family relationships with controlling shareholders, members of the board of commissioners and/or members of the board of directors (Peraturan BI No 11/33/PBI/2009)	The number of independent commissioners is divided by the total number of commissioners	Ratio
Audit Committee	The committee responsible for overseeing external audit and is the main contact between the auditors and the company (Hasian, 2019)	The number of audit committees outside the independent commissioners divided by the number of	Ratio



Jenis Variabel	Defenisi Operasional	Pengukuran	Skala
		audit committees in the company Ratio	
Audit Quality	All possibilities that can occur when the auditor audits the client's financial statements and finds violations or errors that have occurred and reports them in the audited financial statements (Hasian, 2019)	Value 1 if the financial statement audit is carried out by KAP The Big Four, and is worth 0 if the financial statement audit is not done by KAP The Big Four	dummy
CSR Disclosure	An action or concept taken by a company (according to the company's ability) as a form of their responsibility towards the social or environment around the company (Ana & Hasian, 2020)	$\frac{\sum X_{ij}}{n_j}$	Ratio
Moderating			
Company Size	The size of the company, the size of the company, a large, established company will have easy access to the capital market (Purnamasari & Fitria, 2015)	Logarithm of Natural Total Sales	Ratio

Population and Research Sample

The population used in this study are all manufacturing companies listed on the Indonesia Stock Exchange for the 2015-2019 period. The sample is a part of the population that is used to estimate the characteristics of the population. The sampling technique used was purposive sampling technique. Sampling is done by taking a sample from the population based on certain criteria. The criteria used are based on certain judgments. The sampling criteria in this study are as follows:

- The company publishes annual reports and financial reports for 4 consecutive years (2015-2019) which can be accessed from the IDX website (www.idx.co.id) or from the company's website and has complete data required in this study.
- The company did not experience a loss during the research year. This is because it will cause the ETR value to be negative, making it difficult to calculate.
- Companies that have an ETR between 0-1 can make it easier to calculate, where the lower the ETR value (close to 0), the company is considered to be more tax aggressive.

According to the aforementioned criteria, the number of company samples used was 67 companies for 5 periods, namely 2015, 2016, 2017, 2018 and 2019. So the total sample size was 67 companies x 5 periods = 335 data to be used in this study.

Types and Sources of Data

In this study, the type of data used is quantitative data. While the data source used is a type of secondary data. This study uses secondary data obtained from the annual financial statements of manufacturing companies listed on the IDX during 2015-2019, which are documented in www.idx.co.id and other relevant sources.

Data collection technique

The data collection method in this research is literature study method and documentation method. The literature study method is by conducting literature reviews and reviewing various literatures such as various journals, articles and other literature books that support this research process. While the documentation method is the process of collecting data by recording documents related to this research.

Method of Analysis

Descriptive statistics

Descriptive statistics in this study are used to provide a description of the character of the research variables by using a frequency distribution table that shows the mode number, score range and standard division.



Classic assumption test

This research was conducted with a simple regression analysis. The use of simple regression analysis must be free from testing classical assumptions. For this reason, before a simple regression analysis is carried out, the classical assumption is tested first. The classical assumption test is done by using the normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

Hypothesis testing

In this study the authors used three independent variables, one dependent variable and one moderating variable. The analytical method used to test the hypothesis is the interaction test or often called Moderated Regression Analysis (MRA), which is a special application of linear multiple regression where the regression equation contains an element of interaction (multiplication of two or more independent variables) (Ghozali, 2011). The regression equation is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \epsilon$$

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1 * Z + \beta_5 X_2 * Z + \beta_6 X_3 * Z + \epsilon$$

Where :

- Y = Tax Avoidance
- α = constant or value Y if X = 0
- β = number or direction of the regression coefficient, which shows the number of increases or decreases in the dependent variable based on the independent variable
- X1 = Independent Commissioner
- X2 = Audit Committee
- X3 = Audit Quality
- X4 = CSR disclosure
- X5 = Company Size
- ϵ = error rate of intruder/error

In this study, the significance level (α) 0.05 or 5% was used. This multiple regression analysis was carried out with the help of the SPSS (Statistical Package For Social Sciences) program Release 25.0 for Windows so that the coefficient of determination, the F statistical value and the t statistical value used in hypothesis testing can be obtained.

RESEARCH RESULTS AND DISCUSSION

Description of Research Data

The results of descriptive statistics about the research variables are presented in table 1.2. From this table, information about the mean, maximum value, minimum value and standard deviation can be found.

Table 1.2 Descriptive Statistics Results

Variabel	N	Min	Max	Mean	Std. Deviation
Independent Board of Commissioners	335	0,20	0,67	0,40	0,088
Audit Committee	335	0,00	1,00	0,64	0,125
Audit Quality	335	0,00	1,00	0,52	0,500
Disclosure of Corporate Social Responsibility	335	0,04	0,45	0,24	0,104
Company Size	335	25,75	33,49	28,58	1,572
Tax Avoidance	335	0,01	0,97	0,28	0,130

Source: Processed data (2021)

Based on table 1.2 above, the descriptive statistical results of the research variables can be presented as follows: The average value of the independent board of commissioners variables is 0.40 or 40%, which means that the size of the independent board of commissioners owned by each company has met the requirements stipulated by the Financial Services Authority Regulation Number 33 / POJK.04 / 2014 that the board of commissioners of an issuer or public company consists of at least three boards of commissioners (POJK, 2014).



The value of the standard deviation is 0.088 or 8.8%, this value shows the magnitude of the maximum increase and decrease in the size of the independent board of commissioners that may occur. The variable for the independent board of commissioners ranges from the lowest value of 0.20 or 20% to the highest value of 0.67 or 67%.

The audit committee variable has an average of 0.64 or 64%. This shows that the audit committee owned by each company has met the requirements stipulated by the Financial Services Authority Regulation Number 55 /POJK.04/2015 that the audit committee consists of at least 3 (three) members who come from independent commissioners and parties from outside the issuer or public company (POJK, 2015). The value of the standard deviation is 0.125 or 12.5%, this value is relatively small compared to the average value of the audit committee of the sample companies. The audit committee variable ranges from the lowest value of 0.00 or 0%, which means that all members of the company's audit committee are sampled from the elements of the independent board of commissioners. And the highest value is 1.00 or 100%, which means that all members of the audit committee of the sample company are not members of the independent board of commissioners.

The audit quality variable has an average value of 0.52. This shows that 52% of sample companies have their financial statements audited by The Big Four Public Accounting Firm (KAP). The standard deviation value of the audit quality variable is 0.500, this value shows the amount of maximum increase and decrease in the audit quality variable that may occur. The lowest score is 0 and the highest score is 1.

The average value of the Corporate Social Responsibility disclosure variable is 0.24 (24%) with a standard deviation value of 0.104 (10.4%), which indicates the level of variation in data distribution. The average is 0.24 (24%), this shows that the average index of the variable corporate social responsibility disclosure by the company is relatively low. The variable of Corporate Social Responsibility disclosure ranges from the lowest value of 0.04 (4%) to the highest value of 0.45 (45%).

The average value of company size as measured by the natural logarithm of total assets is 28.58 trillion with a standard deviation value of 1.572 trillion, which means that the data variation is small (less than 27.005 trillion from the mean). The size of the company ranges from the lowest value of 25.75 trillion, namely the Ateliers Mecaniques D'Indonesie Tbk company in 2015 to the highest value of 33.49 trillion, namely the Astra International Tbk company in 2019. The average company size value is 28.58. that the sample companies have an average of 28.58 trillion assets.

The average value of Tax Avoidance as measured by CETR (Cash Effective Tax Rate) is 0.28 or 28% with a standard deviation value of 0.130 or 13%, which means that the data variation is very small (less than 15.2% of the mean). CETR ranges from the lowest value of 0.01 or 1%, namely the Kabelindo Murni Tbk company in 2017 to the highest value of 0.97 or 97%, namely the Star Petrochem Tbk company in 2018. The average CETR value of 0.28 shows that the company issued cash for tax payments by an average of 28% of the total profit before tax in the sample companies.

Classic assumption test

Normality test

Normality testing using the Lilliefors test. The provisions in the error test are if the L statistic counts <L table ($\alpha = 0.05$), then the error data is normally distributed. But if L count > L table ($\alpha = 0.05$), then the data are not normally distributed. The calculation results are as follows:

Table 1.3 Summary of Normality Test

No	Taksiran	n	L Hitung	L Tabel		Keputusan
				$\alpha = 0,05$	$\alpha = 0,01$	
1	Y atas X1	335	-0,0329	0,0484	0,0563	Normal
2	Y atas X2	335	-0,0358	0,0484	0,0563	Normal
3	Y atas X3	335	-0,0436	0,0484	0,0563	Normal
4	Y atas X4	335	-0,0489	0,0484	0,0563	Normal
5	Y atas X5	335	-0,0388	0,0484	0,0563	Normal

Source: Processed data (2021)

Multicolonierity Test

The tolerance calculation results according to table 1.4 show that there are no independent variables that have a tolerance value less than 10%; all tolerance values are more than 10%; which means there is no correlation between variables. The results of the calculation of the variance inflation factor (VIF) value also show the same thing, there are no independent variables that have a VIF value of more than 10; All of the



variance inflation factor (VIF) values are less than 10. The conclusion is that there is no multicollinearity between the independent variables in the regression model based on the tolerance value test.

Table 1.4 Multicollinearity Test Results

Variabel	Collinearity Statistics	
	Tolerance	VIF
Independent Board of Commissioners	0,957	1,045
Audit Committee	0,915	1,093
Audit Quality	0,68	1,471
Disclosure of Corporate Social Responsibility	0,239	4,188
Company Size	0,282	3,552

Source: Processed data (2021)

Autocorrelation Test

The autocorrelation test is used to determine whether there is a correlation between the confounding error in a certain period and the disturbing error in the previous period. A good regression model is a regression that is free from autocorrelation. The autocorrelation test can be done with the Durbin-Watson (DW) test. The results of the autocorrelation test can be seen in the following table:

Table 1.5 Autocorrelation test results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,270 ^a	0,073	0,059	0,126	2,141

Source: Processed data (2021)

Based on the SPSS output, the Durbin Watson statistical value is 2.141. Meanwhile, from the Durbin Watson table with $n = 335$ and $k = 5$, it is obtained d table, namely d_l (outer limit) = 1.784 and d_u (inner limit) = 1.838 with a significance level of 5%, $4 - d_u = 2.162$; and $4 - d_l = 2,216$; So from the calculation it is concluded that the DW-test is located in the test area. Referring to Ghazali (2011), the regression model in this study is free from autocorrelation problems because the Durbin Watson score is between d_u and $4 - d_u$.

Heteroscedasticity Test

The detection of heteroscedasticity is: 1) The probability value > 0.05 means that it is free from heteroscedasticity. 2) The probability value < 0.05 means that you are exposed to heteroscedasticity. The test results using the Spearman rank test can be seen in the following table:

Table 1.6 Heteroscedasticity Test Results

		X1	X2	X3	X4	X5	
Spearman's rho	Abres	Correlation Coefficient	-0,098	0,108	0,022	-0,045	0,044
		Sig. (2-tailed)	0,074	0,058	0,695	0,098	0,418
		N	335	335	335	335	335

Source: Processed data (2021)

The results of the Spearman rank test in the table above show that the significance probability value of each variable is 0.074, 0.058, 0.695, 0.098 and 0.418. Because the significance probability value of each variable is greater than 0.05, it can be concluded that the data is free from heteroscedasticity.

Interaction Test

The interaction test or often referred to as Moderated Regression Analysis (MRA) is a special application of linear multiple regression where the regression equation contains an element of interaction (multiplication of two or more independent variables) (Ghozali, 2011). Analysis with this interaction test was carried out with the help of the SPSS (Statistical Package For Social Sciences) program Release 25.0 for Windows. From data processing through the SPSS program, the following results were obtained:

Tabel 1.7 Hasil analisis regresi

Keterangan	B	t _{tabel}	t _{hitung}	Sig	Adj R ²	F _{hitung}	Sig
Persamaan 1							
(Constant)	-0,183				0,059	5,194	0,000
X1	0,150	1,967	1,900	0,058			
X2	0,010	1,967	0,183	0,855			
X3	-0,014	1,967	-0,830	0,407			
X4	-0,460	1,967	-3,395	0,001			
X5	0,018	1,967	2,192	0,029			
Persamaan 2							
(Constant)	-2,921				0,091	4,729	0,000
X1	3,438	1,967	2,750	0,006			
X2	0,704	1,967	0,681	0,496			
X3	-0,662	1,967	-1,650	0,100			
X4	4,244	1,967	2,865	0,004			
X5	0,116	1,967	3,279	0,001			
X1X5	-0,116	1,967	-2,618	0,009			
X2X5	-0,025	1,967	-0,708	0,480			
X3X5	0,023	1,967	1,629	0,104			
X4X5	-0,169	1,967	-3,190	0,002			

Source: Processed data (2021)

Based on the results of the regression testing above, an equation can be formed as follows: $Y = -0,183 + 0,150X_1 + 0,010X_2 - 0,014X_3 - 0,460X_4 + 0,018X_5 + e$ dan $Y = -2,921 + 3,438X_1 + 0,704X_2 - 0,662X_3 + 4,244X_4 + 0,116X_5 - 0,116X_1X_5 - 0,025X_2X_5 + 0,023X_3X_5 - 0,169X_4X_5 + e$

From table 1.7 it is known that the adjusted R square value in equation 1 is 0.059. This means that 5.9% tax avoidance can be influenced by the independent board of commissioners, audit committee, audit quality, disclosure of corporate social responsibility and company size, the remaining 94.1% (100% - 5.9%) explained by reasons other than the model. While the adjusted R square value in equation 2 is 0.091. This means that 9.1% tax avoidance can be influenced by the independent board variable, audit committee, audit quality, disclosure of corporate social responsibility, company size, X_1X_5 , X_2X_5 , X_3X_5 and X_4X_5 , the remaining 90.9% (100% - 9.1%) explained by reasons other than the model.

From the Anova test or F test in table 1.7 above, the calculated F value in equation 1 is 5.194 with a significance probability that shows 0.000. The test probability value is much smaller than $\alpha = 0.05$. This shows that simultaneously (simultaneously) tax avoidance can be influenced by the independent board of commissioners, the audit committee, audit quality, disclosure of corporate social responsibility and company size. Meanwhile, the calculated F value in equation 2 is 4.729 with a significance probability that shows 0.000. The test probability value is much smaller than $\alpha = 0.05$. This shows that simultaneously (simultaneously) tax avoidance can be influenced by the variables of the independent board of directors, the audit committee, audit quality, disclosure of corporate social responsibility, company size, X_1X_5 , X_2X_5 , X_3X_5 and X_4X_5 .

Hypothesis test

The effect of the independent board of commissioners on tax avoidance

Based on the results of the calculations in table 1.7 above, it can be seen that t table is greater than t, with a value of 1.967 and t of 1.900 and a significance level of greater than 0.05. This means that the independent board of commissioners has no effect on tax avoidance in a positive direction. Thus Ha1 was rejected.

The effect of the audit committee on tax avoidance

Based on the results of the calculations in table 1.7 above, it can be seen that the t-table is greater than t, with a t-table value of 1.967 and tcount 0.183 and a significance level much greater than 0.05. This means that the audit committee has no effect on tax avoidance in a positive direction. Thus Ha2 was rejected.



The effect of audit quality on tax avoidance

Based on the results of the calculations in table 1.7 above, it can be seen that the t-table is greater than t, with a t-table value of 1.967 and tcount -0.830 and a significance level much greater than 0.05. This means that audit quality has no effect on tax avoidance in a negative direction. Thus Ha3 was rejected.

The effect of disclosure of corporate social responsibility on tax avoidance

Based on the results of the calculations in table 1.7 above, it can be seen that the t table is smaller than t, with a ttable value of 1.967 and tcount -3.395 and the significance level is much smaller than 0.05. This means that the disclosure of corporate social responsibility has a negative effect on tax avoidance because it has a negative direction. Thus Ha4 was accepted.

Firm size can moderate the relationship between the independent board of commissioners and tax avoidance

Based on the calculation results in table 1.7 above, it can be seen that the value of t count X_1X_5 (moderator) is greater than t table, with a tcount of -2.618 and t table 1.967 and a significance level of less than 0.05. This means that company size is able to moderate the relationship between the independent board of commissioners and tax avoidance. Thus Ha5 was accepted.

Firm size can moderate the relationship between the audit committee and tax avoidance

Based on the calculation results in table 1.7 above, it can be seen that the value of t count X_2X_5 (moderator) is smaller than t table, with a tcount of -0.708 and t table 1.967 and a significance level of greater than 0.05. This means that company size is not able to moderate the relationship between the audit committee and tax avoidance. Thus Ha6 was rejected.

Firm size can moderate the relationship between audit quality and tax avoidance

Based on the results of the calculations in table 1.7 above, it can be seen that the value of t count X_3X_5 (moderator) is smaller than t table, with a tcount of 1.629 and t table of 1.967 and a significance level of greater than 0.05. This means that company size is unable to moderate the relationship between audit quality and tax avoidance. Thus Ha7 was rejected.

Firm size can moderate the relationship between disclosure of corporate social responsibility and tax avoidance

Based on the calculation results in table 1.7 above, it can be seen that the tcount X_4X_5 (moderator) is greater than ttable, with tcount -3.190 and ttable 1.967 and the significance level is smaller than 0.05. This means that company size is able to moderate the relationship between disclosure of corporate social responsibility and tax avoidance. Thus Ha8 was accepted.

DISCUSSION

The effect of the independent board of commissioners on tax avoidance

From the research results, it is known that the independent board variable has no effect on tax avoidance in a positive direction. This shows that the more the proportion of independent commissioners owned by the company so that tax avoidance cannot be minimized. The results of this study are in line with research conducted by Ginting (2016) and Fitria (2018) which states that the independent board of commissioners has no effect on tax avoidance. But the results of this study are not in line with the research conducted by Arry (2017) which states that the effect of independent commissioners on the act of minimizing corporate tax can be explained that the more the number of independent commissioners, the greater the effect on monitoring management performance This supervision can reduce agency problems that arise such as the opportunistic attitude of management towards bonuses, so that management has an interest in reducing tax payments to maximize the bonus received by management. With greater supervision, management will be careful in making decisions and be transparent in running the company so that tax avoidance can be minimized. The independent commissioner can actively encourage management to comply with applicable tax laws and regulations and reduce risks such as low investor confidence.



The effect of the audit committee on tax avoidance

From the research results, it is known that the audit committee variable has no effect on tax avoidance in a negative direction. This means that the high or low number of audit committees in a company cannot minimize tax avoidance actions.

The existence of an audit committee that has the task of supervising and evaluating operational performance so that it can run well, in the corporate governance mechanism the audit committee plays an active role in determining policies related to tax burden policies which have a close relationship to tax avoidance activities. The large or small number of audit committees in the company ensures that the audit committee can take precautions against tax evasion by the company. According to the BEI and Bapepam-LK audit committee regulations, every company listed on the IDX is required to have an audit committee, whose members consist of one independent commissioner as chairman and at least 2 independent external companies as members. The board of commissioners is obliged to form an audit committee of at least three people who are appointed and dismissed and are responsible for the board of commissioners. Audit committees with fewer members tend to be able to act more efficiently, but they also have weaknesses, namely the lack of experience of members.

The results of this study support the research conducted by Rahmawati, et al (2016) and Arry (2017) which states that the audit committee has no significant effect on tax avoidance.

The effect of audit quality on tax avoidance

From the research results, it is known that the audit quality variable has no effect on tax avoidance in a negative direction. This means that there is no significant difference between the companies that have been audited by the big four public accounting firm and the non-big four public accounting firm in auditing financial statements which shareholders can misuse to prevent tax avoidance. This is because Public Accounting Firms, both the big four and non big four, have a good reputation in conducting corporate audits that are guided by the quality control standards on audit quality that have been set by the Indonesian Public Accountants Professional Standards Board (DSAP IAPI) as well as the existence of established rules. by the Indonesian Public Accountants Association (IAPI) so that the audit has been confirmed in accordance with the established rules.

The results of this study support the research conducted by Rahmawati, et al (2016) which states that audit quality has no effect on tax avoidance. But it is not in line with the results of Arry's (2017) study which states that audit quality has a significant effect on tax avoidance.

The effect of disclosure of corporate social responsibility on tax avoidance

From the research results, it is known that the variable corporate social responsibility disclosure has a negative effect on tax avoidance. This means that the higher the company discloses corporate social responsibility, the lower the company practices tax avoidance. The results of this study support the research conducted by Ningrum (2018) which states that the higher the company makes CSR disclosure, the lower the company practices tax avoidance. The same thing was expressed by Dharma and Noviari (2017), companies with responsible CSR activities have a lower likelihood of being involved in tax avoidance activities.

In Indonesia, CSR activities are voluntary or not mandatory for companies. This can be explained in Law No. 40 of 2007 article 1 paragraph 3 concerning Limited Liability Companies (PT) states that social and environmental responsibility (CSR) is a company / company commitment to participate in sustainable economic development in order to improve the quality of life and the environment that is beneficial, both for the company itself and the community. local and community in general. Based on this definition, social and environmental responsibility (CSR) is a commitment or awareness of the company. Companies with voluntary disclosure of social responsibility (CSR) or with the awareness of the company's organs integrate social and environmental attention and transparency into the company's operations and interactions with its stakeholders. If the company does tax evasion, the company's reputation will be damaged in the eyes of the community or stakeholders. So that a high level of CSR activity tends to increase the attitude of responsibility that the company has, which is reflected in its obedient attitude in paying the tax burden that has been determined or not doing tax evasion.

Firm size can moderate the relationship between independent board size and tax avoidance

The results showed that company size was able to moderate the relationship between the independent board of commissioners and tax avoidance in a negative direction. This means that tax avoidance can be minimized by large companies or small companies that have a high number of independent commissioners.

The independent board of commissioners is responsible for monitoring the quality of the information contained in the financial statements. Ariawan and Setiawan (2017) state that the existence of an independent board of commissioners in the company will increase supervision and monitoring of company management in



every decision that will be taken. Tight supervision by an independent board of commissioners can influence company management, namely agents, to compile quality financial reports and comply with applicable tax regulations. With the existence of an independent board of commissioners, in any formulation of corporate strategy carried out by the independent board of commissioners along with company management and stakeholders, it will guarantee effective and efficient results, including the policy regarding the amount of the company's effective tax rate. Independent commissioners can carry out a monitoring function to support better company management and make financial reports more objective. Therefore, the opportunistic behavior of management in large or small companies can be avoided by having an independent board of commissioners in a company.

The results of this study do not support the findings of Ginting (2016) which states that the interaction between the independent board of commissioners and company size has no effect on tax avoidance.

Firm size can moderate the relationship between the audit committee and tax avoidance

The results showed that company size was unable to moderate the relationship between the audit committee and tax avoidance in a negative direction. This means that tax avoidance actions cannot be minimized by large companies or small companies that have a high number of audit committees.

The audit committee is a part of company management that has a significant influence in determining company policy. Audit committee members with accounting or financial expertise better understand gaps in tax regulations in a way that avoids detection risks, so they can provide useful advice on tax avoidance (Mulyani et al., 2018). In corporate governance there is a principle of accountability, this is intended so that every element in the disclosed financial statements can be informed in an accountable manner, besides that the formation of an audit committee is also expected to reduce agency problems in the company.

Based on agency theory, the higher the existence of the audit committee in the company, the better supervision of company activities and agency conflicts that occur due to management's desire to implement tax avoidance can be minimized. This shows that a company that has an audit committee that does its job well will be more responsible and open in presenting financial reports because the audit committee will always supervise all activities within the company, thereby minimizing tax avoidance.

Firm size can moderate the relationship between audit quality and tax avoidance

The results showed that firm size was unable to moderate the relationship between audit quality and tax avoidance in a positive direction. This means that tax avoidance actions cannot be minimized by large companies or small companies whose financial reports are audited by the big four public accounting firms and non big four public accounting firms.

Audit quality is all the possibilities that can occur when the auditor audits the client's financial statements and finds violations or errors that have occurred and reports them in the audited financial statements. Companies that are audited by the Big Four Public Accounting Firm (KAP) usually produce better quality audits, and the more difficult it will be to implement tax avoidance policies. Thus, if the quality of the audit of a company is higher, the company is less likely to manipulate profits for tax purposes (Chai & Liu, 2009).

The agency theory put forward by Jensen & Meckling (1976) suggests that there is a conflict between the principal and the agent which is motivated by differences in interests and information asymmetry between managers as agents and owners / shareholders as principals. The audit activity appears as a third party to ensure that the company's financial statements are credible and show the true situation, thereby reducing the asymmetry of information that occurs between the principal and the agent regarding tax avoidance.

Audit is able to detect fraud in financial reports so that it can reduce tax avoidance. Based on several references, the financial statements audited by the KAP The Big Four auditors are believed to be of higher quality because they display the true value of the company (Subagiastra et al., 2016). . Companies that use Big Four KAP services in auditing the company's financial statements will prevent the company from doing tax avoidance because the auditor's function is to test the fairness of a company's financial statement information properly and accurately so as to maintain the company's reputation.

Firm size can moderate the relationship between disclosure of corporate social responsibility and tax avoidance

The results showed that company size was able to moderate the relationship between disclosure of corporate social responsibility and tax avoidance in a negative direction. This means that large companies or small companies that carry out CSR disclosure properly can minimize tax avoidance actions.



The results of this study can support the theory of planned behavior, especially behavioral beliefs which explain that before an individual does something, the individual will have confidence about the results that will be obtained from his behavior and evaluation of these results. Positive behavior will also produce positive results (Chen, 2010). CSR disclosure is a positive and important activity that supports the survival of a company (Lanis & Richardson, 2011). Large companies or small companies that have a high level of CSR disclosure activity indicate that the company has a high sense of social responsibility which is reflected in obedience in paying the tax burden that has been set or by not taking tax avoidance.

The results of this study can also support the legitimacy theory which states the relationship between the company and the social, namely society, government, individuals and community groups. Large companies or small companies that have adjusted their operations to prevailing social values and norms will get recognition or legitimacy, thus obtaining a positive image. CSR disclosure by large companies or small companies is one way to get a positive image from the community. Large companies or small companies can realize social responsibility to society through the government by paying tax burdens in accordance with their obligations and minimizing tax avoidance.

CONCLUSIONS

Based on the results of the analysis, the following conclusions can be drawn: 1) The variable of the independent board of commissioners has no effect on tax avoidance in a positive direction; 2) The audit committee variable has no effect on tax avoidance in a negative direction; 3) The audit quality variable has no effect on tax avoidance in a negative direction; 4) The variable of corporate social responsibility disclosure has a negative effect on tax avoidance; 5) The size of the company is able to moderate the relationship between the independent board of commissioners and tax avoidance in a negative direction; 6) The size of the company is unable to moderate the relationship between the audit committee and tax avoidance in a negative direction; 7) The size of the company is not able to moderate the relationship between audit quality and tax avoidance in a positive direction; and 8) Company size is able to moderate the relationship between disclosure of corporate social responsibility and tax avoidance in a negative direction.

LIMITATIONS

There are several limitations found in this study, among others: 1) The measurement indicators for corporate governance mechanisms in this study only use the size of the independent board of commissioners, audit committee, and audit quality; 2) Researchers limit the object of research to manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the period from 2015 to 2019.

SUGGESTIONS

By considering existing limitations, it is hoped that future research will improve the following factors: 1) For companies to be able to pay attention to any decisions that will be made and the risks that will be borne from any decisions made whether they are in accordance with the law and applicable tax regulations. Judging from the average size of the company which tends to be closer to the maximum value, which causes companies to tend to be more supervised by the government in terms of tax revenue; 2) The government is expected to increase more thorough supervision of taxes paid by companies so as to increase state tax revenue and reduce tax avoidance practices by companies; 3) For further researchers, it can increase the variables used as a proxy for the corporate governance mechanism in order to obtain more accurate research results regarding the effect of corporate governance mechanisms on tax avoidance. As well as increasing the number of research samples and extending the study period by increasing the observation period. It is suggested that in future studies more accurate results can be obtained; and 4) For academics, the results of this study can be used as a rationale for developing research in the field of accounting, especially those related to tax avoidance.

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IMPACTS OF *MORINGA OLEIFERA* LEAF POWDER (MLP) ON THE PROTEIN CONTENT AND ENERGY VALUE OF *COLOCASIA ESCULENTA* (TARO) PORRIDGE: A TRADITIONAL INFANT FOOD IN GUINEA

Daniel Mamy^{1,2}, Xiumin Chen¹, Aboubacar Sangaré³

¹School of Food and Biological Engineering, Jiangsu University, 301 Xuefu Road, Jingkou District, Zhenjiang, Jiangsu 212013, P.R. China

²Higher Institute of Sciences and Veterinary Medicine (ISSMV) of Dalaba, P.O. Box 09, Dalaba-Tangama, P.R. Guinea

³Master of Applied Chemical Biology, Gamal Abdel Nasser University, Guinea

Corresponding Author: Daniel Mamy

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ABSTRACT

Moringa oleifera leaf powder (MLP) has exceptional nutritional properties due to its high content of micronutrients, fatty acids, and especially protein. This makes it a suitable ingredient for the fortification of taro flour. Taro is a high-energy product but low in protein and fat, which weaning children need for their normal development. This study aimed to evaluate the protein-energy contribution of MLP powder in infant taro porridge. Three fortified taro porridges named FTP10% (Taro + 10% of Moringa), FTP15% (Taro + 15% of Moringa) and FTP15% (Taro + 15% of Moringa) were performed. Their analyses indicated significant increases ($P < 0.05$) in crude protein content, energy value and titratable acidity from $0.580 \pm 0.046\%$ to $1.570 \pm 0.052\%$, $82.137 \pm 43\%$ to $88.807 \pm 658\%$ and from $0.130 \pm 0.017\text{g}/100\text{g}$ to $0.380 \pm 0.010\text{g}/100\text{g}$ respectively.

KEYWORDS: Proximal composition, taro porridge, *Moringa oleifera*.

I. INTRODUCTION

Many children suffer the consequences of poor nutrition and a food system that does not take into account their nutritional needs (Heber, 2019). Globally, 240 million children under five are malnourished, of whom 22.2% are stunted, 7.5% are undernourished and 5.6% are overweight. These rates have remained almost constant over the past 20 years. Africa and Asia are the most affected continents (Aprifel, 2018). Traditional practices detrimental to child health are determinants of malnutrition that contribute to neonatal, infant, and child mortality (FMI, 2013).

In Guinea, the prevalence of global acute malnutrition and chronic malnutrition is respectively

14.4% and 37.5% among children aged 6-59 months; 8.3% for severe acute malnutrition and 6.1% for moderate malnutrition (ANASA, 2017). Malnutrition is influenced by the mother's level of education: from 34% among children of mothers with no education, the proportion drops to 25% among those whose mothers have primary education and 17% among those whose mothers have secondary education (FMI, 2013). Industrial infant flours cost from 20,000 to 59,000 Gnf, which is (2 to 6 dollars). The quantities imported were respectively 1,154,556 Kg in 2012; 1,028,626 Kg in 2013 and 1,503,039 Kg in 2014 (DND: Direction Nationale de la Douane, 2016). After six months, breast milk is insufficient to cover the child's protein and



energy needs (Zannou-Tchoko Viviane Jocelyne, 2011). The consumption of poor quality complementary foods in insufficient quantity aggravates the growth delay (Olivier, 2006). Studies in different parts of Africa have shown that poor quality complementary foods are a major reason for the relatively high rates of malnutrition observed (Karimou, 2004).

To ensure a balanced diet, it is, therefore, necessary to offer the child meals that include both energy and protein nutrients necessary for growth (Delman Chantal, 2011).

Moringa oleifera leaf powder (MLP) has extremely high nutritional value; it is an important source of energy for human consumption (Martinus J.R. Nout, 2019). To date, it is used by the food and biochemical industries as a feed. However, their use as an ingredient in animal and human nutrition is being promoted (Wasif Noumana, 2016). It is an important source of chemical compounds: minerals, vitamins, fatty acids, amino acids, proteins, and glycosides (Wouyo Atakpama, 2014; Sofowora, 2010). In these leaves, linolenic acid (C18:3, cis-9, 12, 15) was found in the highest amount (49 - 59%), followed by palmitic acid (C16:0) (16 - 18%) and linoleic acid (C18:2, cis-9, 12) (6 - 13%). The powder contains very high proportions of good quality protein, vitamins, and minerals (Mpupu Lutondo Blaise, 2012). The fresh leaves contain a total nitrogen content of 1.42 g/100g (Belhi M., 2018). Studies in two regions of Nigeria indicated that the leaves, pods, and seeds of *M. oleifera* contain Ca, Mg, Fe, and Cu (Anjorin, 2010). This explains its use as a food supplement by rural populations (Houndje Bidossessi Victor Saturnin, 2013). Studies have shown significant improvement in WAZ, WLZ, and MUAC scores in infants who received the fortified food with MLP compared to those in the control group (Andrew, 2010).

Taro is an energy-rich tuber due to its high carbohydrate content, which is widely consumed in sub-Saharan Africa, both in villages and cities (Rabiou Maman Moustapha, 2019). It is consumed as a stew, boiled, baked, or added to sauces (Salunkhe D.K., 1998). Taro tubers are an important source of energy for human consumption because of their high starch content (Martinus J.R. Nout, 2019). Taro contains a lot of carbohydrates (82.34±3.53%), it is an essential energy food with a carbohydrate content of 60 to 90%, containing 66 to 86% starch (Aboubakar, 2009). Its edible part contains 26.2 g of carbohydrates per 100 g (Grubben, 2004). But taro is a low source of protein (1.0-4.5%) and fat (0.4-0.7%). Increased dietary fiber

consumption may help to prevent diseases including diabetes, ischemic heart disease, colon cancer, and a variety of other digestive issues. Fiber appears to operate as a molecular sieve, trapping carcinogens that would otherwise circulate through the body; it also absorbs water, boosting stool production (Himeda, 2018).

In this study, we evaluated the protein-energy contribution of *Moringa oleifera* leaf powder to taro porridge, a food traditionally used in the care of weaning-age children in Guinea.

II. MATERIALS AND METHODS

2.1. Material

The respective quantities of 1295.01 g of taro tuber flour (*Colocasia esculenta*) and 848 g of Moringa leaf powder were used in this study. The Moringa leaves were harvested in Cobayah district of Conakry-Guinea. Taro tubers (Kissi variety) from the Forest-Guinea region were purchased in Tanery market in the same city.

2.2. Methods

2.2.1. Preparation of enriched flours and porridges

Moringa leaves were oven-dried (Genlab Oven brand) for 4 hours at 53-55°C after washing, sorting, and draining, with an average drying density of 0.05 g/cm². The taro tubers after being washed, blanched, and peeled, and cut into slices of about 3 to 5 mm thickness with a kitchen knife, were oven-dried for 24 hours at 73 - 75 °C. The average density was 0.20 g/cm². The dried Moringa leaves and dried taro slices were ground in a traditional aluminum mortar and sieved through a 1.28 mm stainless steel kitchen sieve of the brand MATFER. Three fortified taro flours at 10%, 15%, and 20% with Moringa leaf powder and three corresponding porridges were prepared and analyzed. The enriched porridges were prepared by cooking the taro flour at a maximum temperature of 101°C, in potable water for 15 minutes. 22.50 g, 21.25 g, and 20 g of taro flour were added to 50 ml of drinking water respectively. 250 ml of water was boiled and the (flour + 50 ml of drinking water) was mixed with the boiled water and cooked for 15 minutes. After cooking, and cool for 15 minutes, the corresponding amount of Moringa leaf powder (2.5 g, 3.75 g, and 5 g) was added and homogenized. The manufacturing flow chart of Moringa leaf powder and taro flour are in figure 1 and the main manufacturing steps in figure 2.



Figure 1: Manufacturing flow chart and main manufacturing steps

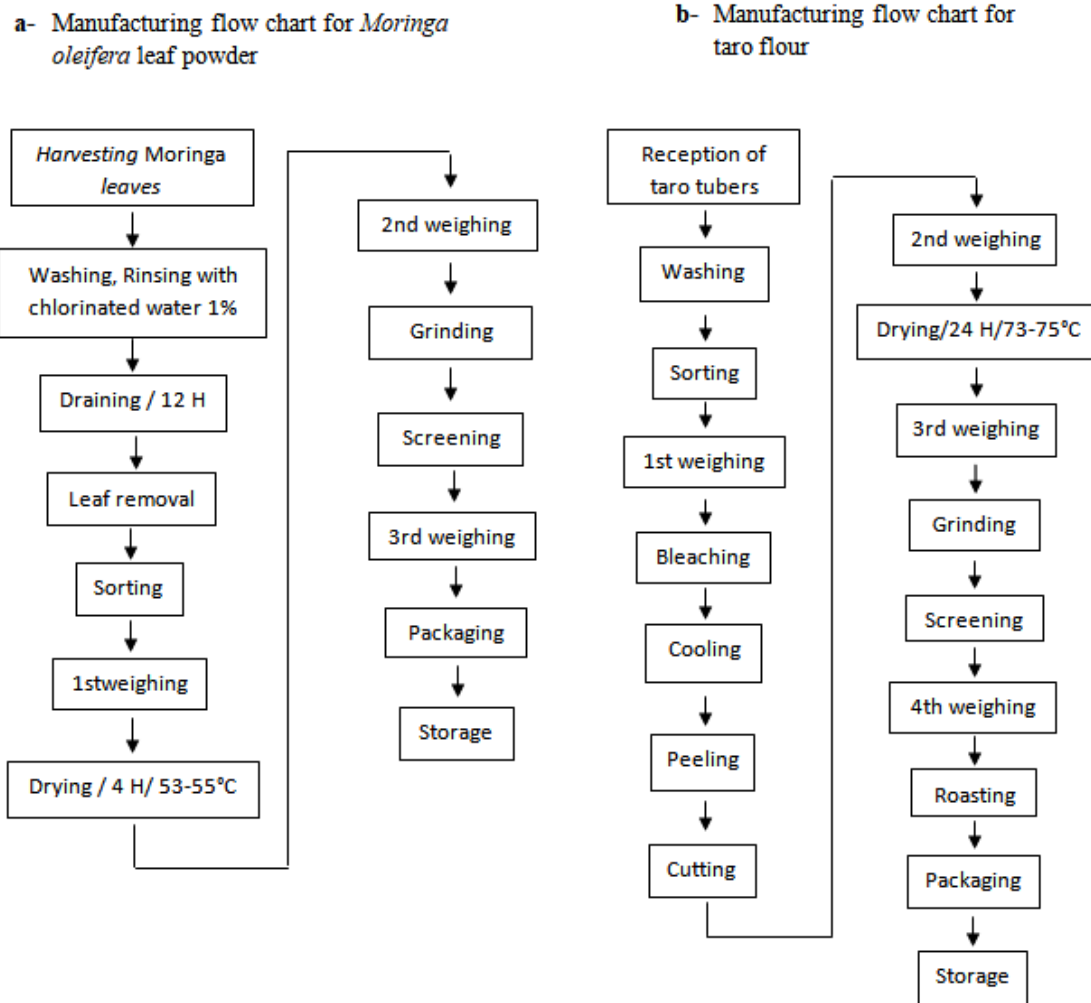


Figure 2: Products of the main manufacturing steps





2.2.2. Determination of physicochemical parameters

The products were subjected to physicochemical analyses at the Central Laboratory for Veterinary Diagnosis (LCVD) of the National Directorate of Livestock in Guinea.

2.2.2.1. Proximal composition

Dry matter, total ash, total fat, total carbohydrate, and total protein were determined by the AOAC method (AOAC, 1990). The dry matter was determined by drying in an oven at 105 °C to a constant weight. Total proteins were determined by the Kjeldahl method using a nitrogen-protein conversion coefficient of 6.25. Total lipids were determined by the Soxhlet method using hexane. Total carbohydrates were determined by the method of Gauss bonass which consists in transforming by acid hydrolysis (HCl 5%) the starch into glucose which is dosed by reduction of Fehling's Liquor (Jean-Louis, 1991). And the total ashes were determined by incineration in the Carboliter WF 1200 muffle furnace at 550-600°C.

2.2.2.2. Determination of pH and titratable acidity

The pH and titratable acidity were determined for only the taro porridge. The pH was determined by the electrode method (Kouassi, Traoré, & Sirpé, 2008). And the titratable acidity was determined according to the ISO 6091:2010 reference method.

2.2.2.3. Determination of energy value

The energy values of the enriched porridges were calculated by applying the heat coefficients of Atwater and Rosa (1889) with 4 Kcal for 1g protein, 9 Kcal for 1g fat, and 4 Kcal for 1g carbohydrate.

2.2.2.4. Statistical analysis

For statistical analyses, Minitab 18 software and one-way ANOVA test were used to compare the means of titratable acidity, moisture, and contents of crude protein, total fat, total carbohydrates, and energy value.

III. RESULTS

3.1. Drying and grinding of *Moringa oleifera* leaves and taro slices

The results of the drying of *Moringa oleifera* leaf powder and taro flour showed that the drying efficiency of Moringa leaves was higher than that of taro slices, 46.22±0.727% versus 25.306±0.084% respectively. This difference could be due to the high thickness of taro slices, its high moisture content compared to Moringa leaves (Maevalandy, 2016; Huang, 2007). It could also be due to the drying density, drying time, and drying temperature. The

milling yield of taro slices was 78.69±0.54%, it was higher than 74.05±0.08% of Moringa leaves. This result could be due to the high loss of Moringa powder during milling because of the method used.

3.2. Physicochemical analysis of taro flour and *Moringa oleifera* powder

The results of the physicochemical analyses of taro flour and Moringa leaf powder are reported in Table 1. Analysis of these results showed that there was a significant difference ($p < 0.05$) between *Moringa oleifera* leaf powder and taro flour. Taro flour was significantly richer than Moringa powder in total carbohydrates, respectively $73.16 \pm 0.28\%$ and $31.40 \pm 0.10\%$ and in energy value ($p = 0.000$) respectively $313.58 \pm 1.06\%$ and 248.60 ± 1.15 . However, *Moringa oleifera* leaf powder was significantly richer ($p < 0.05$) than taro flour in dry matter, total ash, crude protein, and total fat. This significant richness could be explained by the enrichment of taro flour (a product with high energy value) by Moringa powder, which is a product rich in proteins, fats, and minerals compared to taro flour.

3.3. Physicochemical analyses of enriched taro porridge

The results of the physicochemical analysis of the enrichment of taro porridge with *Moringa oleifera* leaf powder are presented in Table 2. The results indicated a significant ($p < 0.05$) decrease in the moisture content and pH of the fortified porridges. The decrease in pH could be a limiting factor for the fortification as the infant foods should be slightly acidic. However, dry matter, crude protein, titratable acidity, and the energy value of the porridge increased significantly ($p < 0.05$). In contrast, increasing the amount of Moringa leaf powder did not affect the total lipids, total carbohydrates, and total ash.

**Table 1: Means of proximate content and energy value of *Moringa oleifera* powder and taro flour.**

	Moisture content (%)	Total ash content (%)	Total protein content (%)	Total fat content (%)	Total Carbohydrates content (%)	Energy value Kcal/100g
MOLP	7.247±0.300 ^b	4.357±0.275 ^a	23.970±0.090 ^a	3.013±0.170 ^a	31.400±0.174 ^c	248.600±1.990 ^d
TF	8.030±0.245 ^a	2.490±0.216 ^b	4.050±0.052 ^c	0.523±0.055 ^c	73.167±0.485 ^a	313.580±1.840 ^a
FTF 10%	7.930±0.296 ^a	2.643±0.150 ^b	6.003±0.221 ^d	0.753±0.181 ^{bc}	68.630±0.280 ^b	305.310±1.820 ^b
FTF 15%	7.907±0.188 ^{ab}	2.760±0.115 ^b	6.967±0.133 ^c	0.887±0.096 ^{bc}	66.633±0.300 ^c	302.380±0.445 ^{bc}
FTF 20%	7.863±0.208 ^{ab}	2.823±0.176 ^b	8.017±0.410 ^b	1.010±0.225 ^b	64.447±0.352 ^d	298.940±3.150 ^c

¹ Means that do not share a letter are significantly different,

² MOLP: *Moringa oleifera* leaf powder,

³ TF: Taro flour,

⁴ FTF 10%: Fortified taro flour at 10% of *Moringa oleifera* leaf powder,

⁵ FTF 15%: Fortified taro flour at 10% of *Moringa oleifera* leaf powder,

⁶ FTF 20%: Fortified taro flour at 10% of *Moringa oleifera* leaf powder.

Table 2: Means of proximate content, energy value, pH and Titratable acidity of the fortified taro porridges.

	Moisture content (%)	Total ash content (%)	Total protein content (%)	Total fat content (%)	Total Carbohydrate content (%)	Energy value (Kcal/100g)	pH	Titratable acidity
TP	81.140±0.160 ^a	0.407±0.081 ^a	0.580±0.046 ^d	2.777±0.211 ^a	13.707±0.280 ^a	82.137±1.43 ^c	5.91±0.00 ^a	0.130±0.017 ^d
FTP 10%	80.257±0.297 ^b	0.423±0.150 ^a	1.076±0.090 ^c	2.937±0.116 ^a	13.670±0.245 ^a	85.417±0.66 ^b	5.55±0.00 ^b	0.213±0.015 ^c
FTP 15%	79.780±0.157 ^b	0.460±0.080 ^a	1.310±0.090 ^b	3.037±0.232 ^a	13.650±0.265 ^a	87.170±0.861 ^{ab}	5.41±0.00 ^c	0.260±0.017 ^b
FTP 20%	79.337±0.367 ^c	0.370±0.080 ^a	1.570±0.052 ^a	3.113±0.067 ^a	13.627±0.470 ^a	88.807±1.658 ^a	5.32±0.00 ^d	0.380±0.010 ^a

¹ Means that do not share a letter are significantly different,

² TP: Taro porridge,

³ FTP 10%: Fortified taro porridge at 10% of *Moringa oleifera* leaf powder,

⁴ FTP 15%: Fortified taro porridge at 10% of *Moringa oleifera* leaf powder,

⁵ FTP 20%: Fortified taro porridge at 10% of *Moringa oleifera* leaf powder



IV. DISCUSSION

4.1. Proximal composition

4.1.1. Moisture content of flours and dry matter of fortified porridge

The moisture content of the flours obtained was below 10%. These results are consistent with those of Ndong Noussa, (2007), and Rabiou Maman Moustapha, (2019). This match could be due to the relatively low drying temperature and the relatively short drying time. That is, 73-75°C for 24 hours for taro slices and 53-55°C for 4 hours for Moringa leaves. These values indicate that the raw materials have been properly dried and can therefore be stored without major risk.

4.1.2. Total ashes

The total ashes contents of Moringa leaf powder were much lower than the values of 6.47, 7.29, 10.00 and 10.68% found by Camara D. Aurelia, (2015), Mpupu Lutondo Blaise, (2012), Ndong Noussa, (2007), and Rabiou Maman Moustapha, (2019) respectively. This difference could be due to the harvest area. Results of a compositional study indicated that Ca, Mg, Fe and Cu in leaves, pods and seeds of *M. oleifera* from the Sheda area were relatively higher than those from the Kuje area (Anjorin T. S., 2010). The total ash contents of taro flour were higher than the respective values of 1.54 to 2.18% and 0.80 to 0.99%, for large and small tubers obtained by Rabiou Maman Moustapha, (2019), but corroborates with the results reported by Ndabikunze et al. (2011) and Njintang and Mbofung (2006). The total ash of the fortified porridges was low compared to the range of 0.64 to 5.00% observed by Boureima Kagambèga, (2019). Fortification produces no significant change in total ash of the three enriched porridges. These results indicate a low fortification rate (2.5 g, 3.75 g, and 5 g) of Moringa powder, and also the low energy densities of the porridges. The energy density of a cooked infant porridge should be 1KCal/ml.

It has been reported that children consume 5g of Moringa powder per day. This amount has been estimated at 10, 15, 20 and 30 g (Barichella, 2019; Boateng, 2018). However, it has been reported that Moringa oleifera leaf contains anti-nutrients. Anti-nutritional factors are generally understood to play negative roles by chelating the nutrients and forming a binding factor with the food values thereby making the nutrients non-bioavailable in the system (Stevens, 2016).

4.1.3. Total proteins

The crude protein contents of Moringa leaf powder were lower than 27.10% and 28.72% reported

by Mpupu Lutondo Blaise, (2012) and Manzo ML., (2016) respectively. But they were higher than 10.71±0.81%, obtained by Boureima Kagambèga, (2019). For the taro flour, the crude protein contents were higher than 1.02±0.12% for small tubers and 0.67±0.11% for large tubers obtained by Rabiou Maman Moustapha, (2019). They were also higher than 0.74±0.06% indicated by Gnahé Dago André, (2019). They were in the range of 1.0% to 4.5% reported by Himeda, (2018). The total protein contents of the porridges were lower than the range of 7.22 to 10.22% found by Boureima Kagambèga, (2019).

4.1.4. Total lipids

For the Moringa oleifera leaf powder, the lipid levels were lower than the 7.50±0.27% reported by Ndong Noussa (2007), 10.31±1.2% given by Boureima Kagambèga, (2019) and 8.93% obtained by Camara D. Aurélie, (2015). But higher than 2.30%, found by Mpupu Lutondo Blaise, (2012). The total lipid contents of taro flour were within the range of 0.4% to 0.7% given by Himeda, (2018), but lower than the value of 0.87±0.02% obtained by Gnahé Dago André, (2019). The total lipids of the fortified porridges were also low compared to those of 6.60 to 18.26% reported by Boureima Kagambèga, (2019).

4.1.5. Total carbohydrates

The carbohydrate contents of Moringa leaf powder were low compared to the value of 57.61±2.19% found by Boureima Kagambèga, (2019), and the 60.85% given by Camara D. Aurélie, (2015). This disparity could be explained by the age or region of harvest. The total carbohydrate contents of taro flour were within the range of 60-90% by Aboubacar, (2009). They were higher than the values of 23.80±1% and 22.47±0.33%, respectively for small and large tubers obtained by Rabiou Maman Moustapha, (2019). These results could be due to the species of taro, its state of maturity. With a linear correlation ($r = 0.96$; $P < 0.05$), these values of available sugars and crude protein increased significantly with maturity level (Himeda, 2018).

The total carbohydrate levels of the fortified porridges were very low compared to the values of 30.61 to 80.52% of cereal porridges found by Boureima Kagambèga, (2019).

4.2. pH and titratable acidity

The pH values of the enriched porridges were slightly acidic. They were in the range of 3.31 to 6.31 found by Michel Elenga, (2009) for fermented maize porridges. But slightly above the lower limit and much lower than the upper limit of 4.00 to 9.55 for cereal porridges reported by Boureima Kagambèga, (2019).



The lower limits of the pH values given by these authors could be due to the fermentation of the cereals used. The production of organic acids from lipids would justify the drop in pH during fermentation (Soro S, 2013). Progressive pH adjustment respects stomach and intestine pH, with a pH 2 for peptic digestion and a pH 6.7-7.2 for pancreatic digestion (Ndong Noussa, 2007).

The titratable acidity values were much higher than those of cereal porridges of 0.04 to 0.23g/100g obtained by Boureima Kagambèga, (2019). The pH and titratable acidity values of the fortified porridges could be explained by the pH of Moringa leaf powder, which was 8.70.09 and 7.30.05 for 7-day and 18-month storage periods, respectively, with titratable acidities of 0.71 ± 0.02 and 0.75 ± 0.02 (Bidossessi Victor Saturnin HOUNJJI, 2013). This would contribute to the conservation of the Moringa leaf powder. According to Soro et al (2013), flours with an acidic pH are better preserved against microorganism attacks.

4.3. Energy values

The energy value of *Moringa oleifera* leaf powder was lower than the values of 360.46, 391.85 and 281.90 Kcal/100g obtained respectively by Mpupu Lutondo Blaise, (2012), Camara D. Aurélie, (2015) and Ndong Noussa, (2007). The energy value of taro flour was also below the range of 396.85 to 417.98 Kcal/100g reported by Aboubakar, (2009). But it was higher than the 109.43 ± 6.97 and 101.03 ± 1.36 Kcal/100g for small tubers and for large tubers respectively obtained by Rabiou Maman Moustapha, (2019). These disparities could be explained by the species of taro and the climatic influence of the area where the tubers were harvested.

For the fortified porridges, the energy values were slightly lower than the 105.4 ± 0.1 and 108 ± 0.14 Kcal/100g found by Soro S, (2013) in yam porridges fortified at 10% and 20% with soy flour respectively. These values were within the range of 17.82 to 114.73 Kcal/100g observed by Boureima Kagambèga, (2019). Our porridges have a low energy value. They do not support the claim that the consumption of energy and nutrient rich porridges contributes significantly to the nutritional needs of children. They must be given at a very high daily frequency to cover the child's energy needs. Porridges with an energy content of 100 to 120 kcal/100 ml should be given multiple times a day, especially to children who exhibit signs of malnutrition or who have lost their breast milk. The quantity of energy a child can get from porridges each day is determined by the number of meals consumed, the amounts consumed at each meal, and the porridges' energy density.

CONCLUSION

Three formulations of infant taro porridges fortified with *Moringa oleifera* leaf powder were performed. Significant increases in total ash, crude protein, and energy value of the fortified porridges were observed. By minimizing dependence on imported mineral complexes, fortification of taro flour with Moringa leaf could help reduce malnutrition in developing countries. However, as compared to taro flour, the high protein and lipid content of Moringa leaf powder is still insufficient to meet the demands of children at weaning age. Taro flour supplementation with Moringa leaf should therefore be mixed with other high-protein local products.

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AUTHOR'S CONTRIBUTIONS

Daniel Mamy edited the article. The co-authors: Xiumin Chen, and Aboubacar Sangaré, read the document.

CONFLICT OF INTEREST

There is no conflict of interest between the authors of this article.

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IMPACT OF COVID-19 2ND WAVE ON ACCEPTANCE OF E-LEARNING AMONG POSTGRADUATE STUDENTS - A CASE STUDY

Dr. G. Thirumoorthy¹, A. Arun², Dr.T.Malliga³

¹Assistant Professor (Guest), Department of Education, Bharathiar University

²Assistant Professor, Vellalar College of Education, Erode.

³Principal, Vellalar College of Education, Erode.

ABSTRACT

This paper illustrates to what extent the postgraduate students are accepting the E-learning during the Covid-19 second wave. There were 88 samples were collected from the postgraduate students by using Google Form as a normative survey. The researcher adopted the tool entitled "ELAM: A Model for Acceptance and Use of E-learning by Teachers (Teaching) and Students (Learning)", developed and validated by Khan & Iyer (2010). The collected data were analyzed by using descriptive and inferential statistics. The result reveals that the acceptance level of E-learning is above average among postgraduate students during the 2nd wave of Covid-19.

KEY WORDS: E-learning, Covid-19, Post graduate students, Acceptance.

INTRODUCTION

The unstable environment and critical environmental turmoil create new opportunities to survive. Adaptation and acceptance of an unstable environment by adopting a new environment is the only solution to fit into survival. The information and communication technologies (ICT) provide the opportunities to face the conflicted environment such as Covid-19. Mobility of people is totally prohibited during the last two years due to the Covid-19 lockdown. Due to these pandemic situations, the entire formal educational system was interrupted. During the lockdown period, the students continuously engaged in the online classes, and the entire educational management was executed by using ICT. The E-learning methodology may not provide opportunities for physical interaction with friends, teachers, faculty, society, etc. The student psychologically may be exhausted due to continuous engagement in online learning. The level of acceptance may also diminish towards the E-learning. Hence the researcher intended to study the level of acceptance of e-learning among postgraduate students.

STATEMENT OF THE PROBLEM

Khan (2020) stated that the schools shifting to online classes amid the COVID19 lockdown, parents have alleged educational management were overburdening the students with assignments in a bid to complete the syllabus. Any integration of technologies is interest initially but it may gradually decrease its interest and insolvent. In India, online learning was initiated at the beginning of 2020 and it will continue till the end of Covid-19. The students who are perusing graduation and post-graduation are completed almost their semester examination online. But ensuring the level of acceptance and sustaining the quality of higher education becoming a great challenge. The study of Maulana (2021) reveals that online learning in higher education of psychologically impactful, which resulted in 29% of students having a level of depression above normal, 70% of students had an anxiety level above normal, and 46% of students had a stress level above normal and Babar, Hassan et al (2021) findings reveal that approximately 41% of the students were facing severe psychological distress while about 65% were found unsatisfied with online classes. Besides, a linear



negative relationship between the independent variable, i.e. psychological distress, and the dependent variable, i.e. satisfaction from online classes was found. Not only mental health, but they are also facing some health problems like eye strain, headaches, and fatigue from seeing the screen for such a long time. Besides, sports education and extracurricular classes have also stopped (Nandy, 2020). Especially the Covid-19 second wave made a great impact on the level of acceptance of E-learning among students who are engaged in higher education. Hence, the present study explored the acceptance level of E-learning among post-graduate students.

OBJECTIVES OF THE STUDY

The present study has the following objectives:

- To find out the acceptance of E-learning among postgraduate students.
- To find the is there any significant difference in the mean score in acceptance of E-learning among postgraduate students with respect to a) Gender (Male & Female), b) Locality (Rural & Urban), c) Stream (Arts & Science), d) Year of Study (1st Year & 2nd Year) & e) Computer Course (Have & Have Not).

Hypotheses of the Study

Based on the above objectives the null hypotheses were formulated to test.

Delimitation of the Study The present study has the following delimitation:

1. The investigators able to delimit only 88 samples of postgraduate students.

2. The investigators chose the Bharathiar University, Tamil Nadu for the present study.

Materials and Methods Used

For the present study, the researcher adopted the tool entitled “ELAM: A Model for Acceptance and Use of E-learning by Teachers (Teaching) and Students (Learning)”, developed and validated by Khan & Iyer (2010). The scale consists of 28 items with a five-point Likert scale. All the items are positive; hence the maximum score is 140 and the minimum score is 28. The Cronbach's Alpha Reliability is 0.78.

Sample and Collection of Data

The students who are perusing postgraduate degrees in Bharathiar University during the Covid-19 2nd wave were considered as population. Due to the Copvid-19 pandemic situation, the researcher avoided physical contact to collect data; hence the Google form was created and circulated in the Bharathiar University students’ Whatsapp groups. One week time duration was given to submit the filled Google form. The collected data were tabulate and interpreted.

Statistical Analysis

The collected data were analyzed by using descriptive and inferential analysis. The statistical techniques ‘t’ test was employed for analysis and interpretation of the data.

Analysis of the Data and interpretation

Data were collected from 88 samples of postgraduate students about the acceptance of acceptance of E-learning. The collected data were interpreted as fellow.

Table: 1 Acceptance of E-learning

N	Mean	Mid Value	Result
88	106.63	70	Favorable

Above Table No1 reveals that the calculated mean value (106.63) is above the mid-value (70). Hence, the postgraduate students are favorable in accepting online learning.

Testing of Hypotheses

Ho1. There is no significant difference in the mean score in acceptance of E-learning among postgraduate students with respect to a) Gender (Male & Female), b) Locality (Rural & Urban), c) Stream (Arts & Science), d) Year of Study (1st Year & 2nd Year) & e) Computer Course (Have & Have Not).



Table: 2. Significant difference in the mean score in acceptance of E-learning among postgraduate students with respect to a) Gender (Male & Female), b) Locality (Rural & Urban), c) Stream (Arts & Science), d) Year of Study (1st Year & 2nd Year) & e) Computer Course (Have & Have Not).

Variables	Category	N	Mean	SD	't'	'P'	S/NS
a) Gender	Male	16	97.50	4.64	5.96	0.00	S
	Female	72	108.67	7.13			
b) Locality	Rural	64	104.88	6.991	3.59	0.00	S
	Urban	24	111.33	8.761			
c) Stream	Arts	48	109.00	7.563	3.19	0.00	S
	Science	40	103.80	7.670			
d) Year of Study	1 st Year	48	107.50	7.757	1.11	0.27	NS
	2 nd Year	40	105.60	8.267			
e) Computer Course	Have	48	109.00	7.563	3.19	0.00	S
	Have Not	40	103.80	7.670			

Significance at 0.05% Level

The above table-2 reveals the calculated 't' values of a) Gender (5.96), b) Locality (3.59), c) Stream (3.19) and e) Computer Course (3.19) are greater than the table value (1.96). Hence the formulated null hypothesis Ho1 a), b), c) and e) are rejected at 0.05 % level and accepted the alternate hypothesis. However, the calculated 'value of d) Year of Study (1.11) is less than the table value (1.96). Hence the formulated null hypothesis Ho1 (d) is accepted at a 0.05 % level.

FINDINGS AND DISCUSSION

- The postgraduate students are favorable in acceptance of E-learning during the 2nd wave of Covid-19. During the first wave of Covid-19, the students may be unfavorable towards E-learning. But the continuous lockdown may be forced to accept the E-learning and gradually familiarized in the E-learning.
- The significant mean differences are found between Gender (Male & Female), Locality (Rural & Urban), Stream (Arts & Science), and Computer Course (Have & Have Not). However, there is no significant differences are found between the year of study (1st Year & 2nd Year).
- A significant difference is found in the mean score between genders; however, the female postgraduate students are more favorable in E-learning than the male. These findings are supported by previous findings such as Huang (2013), Hanham, Lee, & Teo (2021), and Mutambik, Almuqrin, Liu, Alhossayin & Qintash (2021).
- The postgraduate students belonging to the urban areas are better at accepting E-learning than the students belonging to the rural areas.

The similar finding were found in Sulisworo, Kusumaningtyas, Anomeisa, Wahyuningsih, & Rahmadhani (2020).

- The postgraduate students belonging to art backgrounds are better at accepting E-learning than the students belonging to science backgrounds. The present finding is supported by the previous findings of Bhat, Ani & Tiku (2016).
- There is no significant difference in the mean score between 1st and 2nd-year postgraduate students in accepting E-learning.
- The postgraduate students who have completed Diploma, Certificate courses, undergraduate, postgraduate courses related to a computer are better at accepting E-learning than those do not completed any computer-related courses.

RESEARCH IMPLICATION

The present study made an attempt to investigate the level of acceptance of E-teaching among postgraduate students in Bharathiar University, in Coimbatore, Tamil Nadu. The results of the study have the following implications.

The postgraduate students are favorable in accepting E-learning. Hence, it is need of the hour to redefine the teaching and learning methodology. The conventional educational system needs to update according to modern technology. The curriculum, teaching and learning strategies, assessment, and evaluation are must be updated to 21st-century learning objectives.

The instructional design must be constructed to attract the students. Reinforcement, continuous encouragement, uninterrupted follow-up, etc., may



increase the attention of male postgraduate students toward E-learning.

The awareness, motivation, ICT exposure, amenities and opportunities towards E-learning is much better in and around the urban area than the rural area. Hence the same facilities related to ICT and awareness towards E-learning, training, and workshop related to E-learning must provide to all students with special attention must give to the rural students.

The separate, customized, and special training program should offer to arts and science students to excel in E-learning.

The findings reveal that the postgraduate student who has completed any computer-related course are excelled in E-learning. Hence, the university authorities should offer computer courses at free or affordable cost along with the mainstream of the study.

CONCLUSION

The present study explored to what extent the postgraduate students are sustaining their acceptance of E-learning during second covid-19. The findings may be helpful to the higher educational institutions while executing the curriculum transaction through the E-learning method. While considering and implementing the above educational implication the quality of online learning will increase. The present study will stimulate further research in various aspects of E-learning. Similar studies may be conducted in other postgraduate students accure the countries to rationalize the findings and research implications.

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SCORPIO LAGNA CONTRIBUTION IN YOGA FOR FOREIGN VISIT

A Rajaraman¹, Sri Prathyangira Swamy²

¹Research Scholar, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

²Director & HoD, Dept. of Astrology, Vels Int. of Science, Technology & Advanced Studies, Chennai, India

ABSTRACT

'Yoga Going Abroad', this study has kept most of the people born in India with the idea of going abroad at least once in their life. It comes in many forms: higher education, medical education, marriage, work, career, travel, Women living with their husbands after marriage, the opportunity to go abroad for the delivery of a daughter or daughter-in-law living abroad, and for the care of grandchildren after childbirth. The purpose of this study is to study the benefits of those who have gone abroad and those who are living abroad permanently and to explore who will be eligible for yoga abroad.

KEYWORDS – Bhakyashtana, Bhakyathipathi, Pada, Dasa, Buddhi.

I. INTRODUCTION

The hypothesis of the study is to confirm that the influence of the planets Rahu, Saturn and the Moon, which can give yoga abroad, is in the horoscopes of those who receive yoga abroad, and the influence of the karmic signs of Lagna, Nine and Twelfth house, which give yoga abroad. This study examines the horoscopes of those who want to go abroad for education, those who want to go abroad for work, and women who want to go abroad for marriage by examining the horoscopes of those who want to go abroad for education.

II. HEART TREATMENT IN ABROAD

Dasa of Venus-Venus

1. Venus is 8th lord aspect by 6th lord Jupiter. Venus is in the 7th.
2. Sun, karka for heart, is with 12th lord in 8th.
3. In Dasamsa, Venus is with Rahu, Ketu in 6/12 axis and is also debilitated in 6th.
4. Sun, karka for heart, is admitted by Saturn and 6th lord Mercury.

Planets and Diplomatic Service

- i) Beside what has already been stated, the involvement of the 7th and 8th houses would, somehow or the other, be there.
- ii) Saturn in 7th makes a person diplomatic and enterprising during residence abroad.
- iii) Venus with Saturn in the 9th makes a person a diplomat or otherwise engaged in similar work under a king or government.
- iv) Placement of lord of 10th in 7th house makes one travel abroad on diplomatic missions.
- v) If the 10th lord occupies the 12th house the native will have to work in a far off place.
- vi) Sometimes there will be involvement of 8th house as this is the house of secrecy which involves diplomacy.

III. ASPECTS IN YOGA FOR FOREIGN VISIT HOROSCOPES

1. Yoga going abroad occurs when the planets Rahu, Saturn and the Moon sit in 9th – 12th places.
Overseas yoga is caused by the sitting of the planets Rahu, Saturn, and the Moon, which can provide overseas yoga in Bhakyashtana(9), overseas, distant, and sleepy places (12).
2. 1 - 9 - 12 house lords get the essence of Rahu, Saturn and the moon star, so the yoga of going abroad occurs.
3. 1 - 9 - 12 obtaining the essence of their star pada causes yoga to go abroad.
4. Yoga going abroad occurs as the movable Sign, water Sign or air Sign is 9th – 12th places to the Lagna target.



As the average person is unable to stay in one place like a snake, the 9 – 12th sign of the average person will go abroad, resulting in yoga going abroad. Water Sign gives to the person an unstable state like stagnant water, so 9th – 12th Water Sign will have the opportunity to go abroad. As the Air Sign becomes unstable in one place like an airborne cargo, the air Sign becomes 9th – 12th place as Air Sign will giving it a chance to go abroad.

5. 1 - 9 – 12th Lords change within themselves and the yoga of going abroad occurs.

Lagna house lord, Bhaktyathipathi, Foreign Sign house Lord Change within themselves are those who are spiritually driven to go abroad.

IV. RULES IN FOREIGN VISIT HOROSCOPE

Rule No. 1:

1 - 9 - 12th houses in Rahu, Saturn, the moon is going to get the yoga going abroad.

Rule No. 2:

Rahu, Saturn and Moon in 1 - 9 - 12th house Lord padas.

Rule No. 3:

Lagna Lord in 9th - 12th house Lord padas.

Rule No. 4:

9th and 12th houses to the Lagna is to go abroad as a Movable Sign, Water Sign, or Air Sign.

Rule No. 5:

1st - 9th - 12th house lords change within themselves to get yoga going abroad.

V. HOROSCOPE TABLES

Example Horoscope : 01

Date of Birth	: 10.10.2010	Time of Birth	: 10.00 AM
Place of Birth	: Arkad	Lagna	: Scorpio
Signs	: Libra	Star	: Visaka - 2
Dasa Bhukthi	: Rahu Dasa 06 Years 10 Month 17 Days		
Foreign Visit	: 14.10.2019 – Oman – Travel with Parents		
Time of Foreign Visit	: Sun Dasa – Moon Buddhi – Moon Antharam 15.04.2011 – 30.04.2011		

JUPITER			KETU
	RASI		
RAGU	LAGNA	MARS MOON VENUS	SATURN MERCURY SUN

VENUS	MARS	MOON SATURN	MERCURY
	NAVAMSA		JUPITER SUN RAGU
KETU			
LAGNA			

Rules applied in horoscope table:

Rule 1: 12th houses in Moon is going to get the yoga going abroad.

Rule 2: 12th Lord Venus in Rahu pada.

Rule 4: 9th house to the Lagna is to go abroad as a Air Sign.

Rule 5: 9th house lord Moon in 12th house to get yoga going abroad.

12th Lord Connection with Moon.

Example Horoscope : 02

Date of Birth	: 05.02.1975	Time of Birth	: 01.20 AM
Place of Birth	: Chithoor	Lagna	: Scorpio
Signs	: Scorpio	Star	: Anuraadha - 3
Dasa Bhukthi	: Saturn Dasa 08 Years 08 Month 08 Days		
Foreign Visit	: August 1995 – London – Job related Travel		
Time of Foreign Visit	: Mercury Dasa – Rahu Buddhi – Moon Antharam (20.06.1995 – 06.09.1995)		



JUPITER		KETU	SATURN
VENUS	<u>RASI</u>		
MERCURY SUN			
MARS	LAGNA MOON RAGU		

SATURN	KETU	JUPITER	
VENUS	<u>NAVAMSA</u>		SUN
			LAGNA
		MOON RAGU	MARS MERCURY

Rules applied in horoscope table:

Rule 2: 9th Lord Venus in Rahu pada.

Rule 4: 9th house to the Lagna is to go abroad as a Air Sign.

Rule 5: 9th house lord Moon in Lagna house to get yoga going abroad.

12th Lord Connection with Rahu.

Example Horoscope : 03

Date of Birth	: 12.07.1955	Time of Birth	: 04.40 PM
Place of Birth	: Madurai	Lagna	: Scorpio
Signs	: Pieces	Star	: Revathi - 2
Dasa Bhukthi	: Mercury Dasa 11 Years 03 Month 23 Days		
Foreign Visit	: January 2005 – Jakartha – Take Care of Grand Child		
Time of Foreign Visit	: Moon Dasa – Saturn Buddhi – Moon Antharam (01.01.2005 – 18.02.2005)		

MOON			MERCURY SUN VENUS KETU
	<u>RASI</u>		MARS JUPITER
RAGU	LAGNA	SATURN	

LAGNA	RAGU	SUN	
	<u>NAVAMSA</u>		
VENUS MOON			
	MERCURY	JUPITER KETU	SATURN MARS

Rules applied in horoscope table:

Rule 1: 12th houses in Saturn is going to get the yoga going abroad.

Rule 2: Lagna Lord Mars in Saturn pada.

Rule 4: 9th house to the Lagna is to go abroad as an Air Sign.

Rule 5: Lagna lord Mars and 9th house to get yoga going abroad.

12th Lord Connection with Saturn.

VI. CONCLUSION

The hypothesis of the study is to confirm that the influence of the planets Rahu, Saturn and the Moon, which can give yoga abroad, is in the horoscopes of those who receive yoga abroad, and the influence of the karmic signs of Lagna, Nine and Twelfth house, which give yoga abroad.



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ACADEMICIAN JUMANAZAR BAZARBAYEV AS THE FIRST PHILOSOPHER-SCIENTIST IN KARAKALPAKSTAN

Joldasbaev Paraxat Muratbaevich

Doctoral student of Nukus State Pedagogical Institute named after Ajiniyaz

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ABSTRACT

This scientific article describes the research, deep thoughts and considerations of academician Jumanazar Bozorbaev as a philosopher in Karakalpakstan. At the same time, the academician provided extensive information on the formation of the first scientific and philosophical ideas in the Republic of Karakalpakstan and the results of their research work. The article also provides very good information about the initial philosophical views on the formation of the national idea and philosophical scientific work on the implementation of national development reforms in our country. The article also makes it clear that the pinnacle of human philosophy is human perfection.

KEYWORDS: *philosophy, knowledge, conscious, happiness, unconscious, mentality, pedagogy.*

The genuine member of Uzbekistan Academy of Sciences, academician Jumanazar Bazarbaev has performed a number of effective things in the field of philosophy in Uzbekistan, or more precisely in Karakalpakstan. His several scientific works, manuals, training aids and articles about philosophy were published. Academician J. Bazarbaev is the first Scientific doctor of philosophy among Karakalpak intellectuals. As a philosophy scientist, he believes that philosophy considers the understanding of human self to be a deeper, more complete knowledge of the essence of the consequences and events that pertain to all aspects of humanity.

He sees philosophy as the supreme culture of human thought, the aspiration of the transient to eternity.

Through his works and scientific articles, the scientist has always tried to show that philosophy is recognized as a lover of wisdom, and that the basis of wisdom is intellect. Anyone who reads his works will have the opportunity to understand that wisdom is important in every age, in every nation, and that the science of philosophy is a science that lives forever, a doctrine that leads to life. Through his labors, he taught that the science of philosophy, by its nature, never compels anyone to create happiness, but he says that the meaning and importance of reason, wisdom, which is the way to happiness can build your confidence. More

precisely, "Philosophy is the fruit of thought". Thinking is the substance, the source and foundation of wisdom. Ignorance is a sign of infinity.

At first, thought is person's thinking. "Thinking is an attempt to express the level of knowledge of the world around us, nature, society" [1, p.6].

When J. Bazarbaev thinks about philosophy and its role in human development, he comprehensively demonstrates the close connection between etiquette and service, their complementary features and qualities. He is concerned with the study of etiquette from the point of view of philosophy, its connection with other disciplines, and considers the philosophy of etiquette to be the core of our whole spirituality.

In his works, he is concerned to human issue, which has been at the forefront from the beginning of philosophy ever since. Especially, in the field of philosophy, he evaluates the thoughts about human in a reasonable and meaningful way in terms of the criterion of value, its meaning and place in society. It explains, the natural and social significance of human philosophy, how it differs from living beings in the universe, the nature of human psyche in relation to the environment, human's attitude to the world, his environment and ways of self-transformation, defines the methods as well. Therefore, in a number of his works, he



showed the direct connection of human philosophy with benefits, needs and human beliefs.

J. Bazarbaev also noted that the issue of the great value of human, the value of humanity is one of the main directions of all previous social philosophical ideas.

Ajiniyaz Qosibay uli highly respected this notion in this work, described it as a philosophical feeling, described it as the highest virtue of mankind, and praised the formation of human decency and human's confirmaty to society, proves with convincing that he was a true "Singer of human dignity". In particular, his works, which glorify women's beauty, express confidence that he makes a significant contribution to the advancement of women and the development of women's kindness and respect for his nation and their upbringing.

The fact that Ajiniyaz, philosophically assessed the issues of human generosity and value to human. Ajiniyaz, who brought up the philosophical view that "the beauty of this world is the child of man", compares his ideas with those of Western philosophers, given that his views on human philosophy are in line with those of Western philosophers. As a result, it is concluded that "Ajiniyaz poetry as a great poetry over the centuries, overcoming time, will play a major role in the future and will reach other nations and admire them for its beauty" [2, p.55]. Ajiniyaz describes the philosophy of love in his lyrics as "the lupus of the heart of a girl and a boy who flutter and flutter in search of love" [2, p. 55]. The scientist considers the compassionate relationship between people as a philosophical concept. According to his works, mercy is "the sum of the virtues of human dignity, lightness, generosity, and generosity to orphans" [2, p. 247]. Therefore, it has a nurturing and invigorating power.

He also evaluates charm among girls from a philosophical point of view. He shows that the charm is "love, tenderness, humility, patience, self-awareness, self-awareness, who you are [2, p. 259]

Therefore, our ancestors report that this exemplary custom has been widely used and used in educational work. He considers friendship between people to be a system of relations based on mutual understanding, unity of goals, ideological vision, closeness of memories and benefits.

After gaining the independence of Uzbekistan, according to the initiative of President Islam Karimov paid special attention to the spiritual culture and morality. In order to develop market relations in our country and to explain the peculiarities of this situation to the public of the Republic of Karakalpakstan, in 1993 he introduced the article "Francis Fukuyuma's Concept" [3, p. 136-143]. From 1997 to 1983, he worked on the translation of the Russian translation of "Practical

Economics" into Karakalpak, prepared by the firm "Junior Achievement" in the United States.

He was directly involved in the translation process and became the scientific editor of the proposed textbook which was in Karakalpak language. Candidate of Economic Sciences, Docent A. Abutov, and Candidate of Philological Sciences K. Saparov took part in the translation process. In the opening speech of "Practical Economics", the former head of the republic U. Shirbekov expressed his satisfaction with the fact that this book, written by American economists and translated into many languages of the world, was published in Karakalpak language for the first time. He also expressed confidence that it would be beneficial to each citizen.

He prepared a textbook "Fundamentals of Spirituality" in the direction of "Fundamentals of Spirituality", approved by the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan [4].

This manual "It is not an excerpt from the Uzbek edition, it is the result of the first creative efforts of the authors to use local materials belonging to the territory of Karakalpakstan for the first time". In a number of his works, written in his last years, which express his attitude to the current problem of the field of socio-political, philosophical, spiritual, etiquette, science, knowledge, the question of the value of today's freedom and free life- the intellectual, educated attitude of people to the past and lessons learned from it, is marked by spiritual examples. The ideas expressed in his works are aimed at preserving the national identity of our people, national- cultural values, inculcating the national idea in the minds of our people, especially young people.

J. Bazarbaev, as a scientist, who chose an exemplary methodological way, such as revealing the spiritual foundations, the rules of culture and history, developed the above ideas in his scientific researches.

He clearly stated the connection of the Renaissance with the history and spirituality of our people. He never tired of searching for the truth, the pearls of our spiritual source. He showed these pearls in his work. He sought and found the root of our spirituality from the necklaces he searched for. Anacharsis was the this root. Of course, this innovation in science has brought endless joy to the Turkic people, especially the Karakalpaks. Because we were close to finding the root of our culture, our national values in nearby places. J. Bazarbaev's study of the information about the sage Anacharsis and his delivery to the people in a clear language gave us the task to start to look more deeply into the pages of history. As a result of this comparative study, he dismissed unsubstantiated allegations as K.



Max wrote: "In Scythia, a philosopher named Anacharsis emerged. However, according to him, we cannot say that civilization existed in Scythia" [2, p. 11]. He was able to show convincingly that "Anacharsis added his contribution to spiritual culture to the list of national values and used it to build the great future of our people, to educate the minds of the people, especially the youth" [2, p.11].

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PLEA BARGAINING: CONCEPT, JUSTICE AND ANALYSIS

Vanshika Shukla

Babasaheb Bhimrao Ambedkar University, Lucknow

ABSTRACT

Thus, on the recommendation of Malimath Committee, 'Plea Bargaining' was presented in the "Indian Criminal Equity System" by the "Criminal Laws (Amendment) Act, 2005" to decrease the weight of the courts for example to clear the backlog of the cases. 'Plea Bargaining' can be characterized as a particularly regulatory process where the accused person deals with the prosecution for a lesser punishment or lesser accusation. However, Plea Bargaining is definitely not a native idea of Indian general set of laws, it was acquired from USA. The paper has made an undertaking to assess the "concept of plea bargaining" and "types of plea bargaining in India", and to talk about the demerits with benefits and disservices of plea bargaining, and it also attempts to investigate the legal attitude and approach towards this concept.

INTRODUCTION

The justification for introducing plea bargaining given by the Law Commission in its 142nd Report is: "It is alluring to infuse life in the reformatory provisions exemplified in Sec. 360 request to deliver on probation of good conduct or after admonition Cr. P.C. furthermore, in the Probation of Offenders Act, 1958 which remains for all intents and purposes unutilized at this point." Though, the Justice V.S. Mallimath says the plea bargaining, if appropriately encouraged by courts and the prosecution, will be the most effective instrument to crash accumulations (particularly those who cannot afford a lawyer): "Almost 90 per cent of criminal cases in the US are settled this way rather than by jury? Why not use it in our country which is reeling under accumulations. It ensures rapid equity and decongests our prisons." Plea bargaining will reduce the burden on Indian judicial system. However, Victims would be guaranteed of quick alleviation her than a since quite a while ago drawn (and frequently unsuitable) preliminary.

Thus, it Based on the Law Commission Report and Malimath Committee Report, legislature presented the Criminal Law (Amendment) Bill, 2003, under which another chapter XXIA named as "Plea Bargaining (containing Sections 265A to 265L) has been embedded Procedure by the Criminal Law (Amendment) Act, 2005; i.e., 5-7-2006.

Meaning of the plea bargaining

A plea bargain is an agreement between the defense and the prosecutor where a litigant confesses or no challenge to criminal accusations. In exchange, the prosecutor drops a few accusations, reduces a charge or suggests that the adjudicator enter a particular sentence that is acceptable to the defense.¹

Concept of Plea Bargaining

Although, plea bargaining refers to a pre-trial bargain between the accused and the prosecution whereby a negotiation is reached between the parties to the suit. Plea bargaining is a negotiation between the accused the prosecutor or the victim of an offence where the accused accepts to confess to commission of an offence in return for an advantage which might be a lesser discipline, an exoneration by installment of obligation and so forth. However, the concept of plea bargaining was primarily taken on and held to be legitimately substantial by the courts of the United States.²

¹ Garner, Bryan A., ed. (2000). *Black's law dictionary* (7th ed.). St. Paul, Minn.: West Group. p. 1173. ISBN 978-0-314-24077-4.

² AN ANALYSIS OF THE PLEA BARGAINING MECHANISM IN INDIA: THE PAST, PRESENT AND THE FUTURE. » (lawaudience.com)



Type of plea bargaining

Plea bargains can be widely classified into two types: -

However, a charge bargain where the accused is permitted to confess to a lesser allegation; and a sentence bargain where a denounced can expect a lesser sentence³ (for the expressed charge as opposed to a diminished charge). Both can be allowed uniquely with the preliminary appointed judge's endorsement.⁴ By and large, a supplication deal is utilized to decrease prison sentence time or fines related to the crime being accused of.⁵

Reality bargain is most un-utilized negotiation which includes an admission to specific realities subsequently killing the requirement for the prosecutor to need to demonstrate them as a trade-off for a deal to avoid bringing certain other implicating realities into proof. In a supplication bargain, the respondent may likewise concur at times to give declaration against someone else in return for some arrangement from the prosecutor regarding the discipline.⁶

This is the manner by which plea bargaining will function in India: -

It provides for pretrial arrangement for example the accused should document an application for plea bargaining any time before the initiation of the preliminary.

Relevance of plea bargaining [Section 265-A] Section 265-A provides that provisions apply to the case established on police report too complaint case.⁷

These provisions do not apply to the following offences: -

- (1) Offence punishable with death, life detainment or detainment for a term exceeding 7 years
- (2) Offence relating to socio-economic conditions of the country and they including socio-economic conditions for the time being in force shall be notified by the Central Government.
- (3) Offences committed against women, or children below the age of 14 years.⁸

³ <https://www.nolo.com/legal-encyclopedia/what-the-different-kinds-plea-bargains.html>

⁴ <https://www.britannica.com/topic/plea-bargaining>

⁵ Vanover, Joseph W. (1998), "Utilitarian Analysis of the Objectives of Criminal Plea Negotiation and Negotiation Strategy Choice", *University of Cincinnati Law Review*, **1998**: 183, archived from the original on 2017-10-19

⁶ <http://www.legalservicesindia.com/article/1836/Plea-Bargaining-in-Indian-Legal-System.html>

⁷ Ibid

⁸ Ibid

Application for plea-bargaining [Section 265-B]

Section 265-B provides that a denounced person might file application for plea bargaining in the court it which the case is forthcoming for trial.⁹

Contents of the application

The application must contain a brief description of the case and must be accompanied by an affidavit sworn by the accused stating therein that: -

He had voluntarily preferred the plea bargaining in his case after understanding the nature and extent of punishment provided for the offence. He has not been previously convicted for the same kind of offence.¹⁰

After receiving the application, the court shall issue notice to the Public Prosecutor or the complainant and to the accused to appear on the date fixed for the case. The court shall examine the accused in camera in the absence of other parties to satisfy itself that the accused has filed the application voluntarily.

If the application is filed voluntarily, the court shall provide time to the parties to work out a mutually satisfactory disposition of the case and thereafter fix the date for further hearing.

If the application is filed involuntarily or the accused has been previously convicted, the court shall proceed for further trial in accordance with the provisions of the Code.¹¹

Guidelines for mutually satisfactory disposition (Section 265-C)

Section 265-C provides that

- (1) In a case instituted on police reports, the public prosecutor, the investigating officer and the victim can participate in the meeting.
- (2) In a case instituted on complaint, the court shall issue notice to the accused and the victim of the case to participate in a meeting.¹²

It shall be the duty of the court to ensure the voluntariness of the entire process of the disposition. The accused may participate in the meeting with his plead Section 265-D provides that the report of the

⁹ <https://www.findlaw.com/criminal/criminal-procedure/plea-bargain.html>

¹⁰ <https://www.livelaw.in/columns/criminal-law-plea-bargaining-charge-bargaining-sentence-bargaining-tablighi-jamaat-169521>

¹¹ <https://www.drishitias.com/daily-updates/daily-news-analysis/plea-bargaining>

¹²

<https://lawledge.in/blogdetails/WjFGbWh1ZEhLeTkycUItcDh0dkRIIdz09>



mutually satisfactory disposition to be submitted before the court.¹³

Disposal of the case (Section 265-E)

Section 265-E provides that where a satisfactory disposition of the case has been worked out the

Court shall dispose of the case in the following manner

- (1) The court shall award the compensation to the victim according to the disposition.
- (2) Subject to the provisions of Section 360 order to release on probation of good conduct or after admonition of the Code and the Probation of Offenders Act, 1958 or any other law for the time being in force, the court may impose the punishment.¹⁴

Where a minimum punishment has been provided, the court may sentence the accused on half of such minimum punishment.

Where no minimum punishment is provided for offence, the court may sentence the accused to one fourth the punishment provided or extendable for such offence.¹⁵

Section 265-F judgment of court provides that the court shall deliver the judgment in terms of section 265-E in the open. Court and the equivalent will be endorsed by presiding officer of the court.

265-G finality of the judgment: - provides that the judgment shall be final, and no appeal (except the Special Leave

Petition under Article 136 and writ petition under Article 226 & 227 of the Constitution) shall lie in any court against such judgment,¹⁶

Section 265 H Power of the Court in plea bargaining

A Court will have, for the purposes of releasing its functions under this Chapter, all the powers vested in regard of bail, trial of offences and other matters relating to the removal of a cast in such Court under this Code.

Section 265 I provide that period of detention undergone by the accused to be set-off against the sentence of imprisonment, i.e., benefit of section 428 is permissible in plea bargained settlement as well.

¹³ <https://tripakshalitigation.com/indian-context-of-plea-bargaining/>

¹⁴ <https://www.bbau.ac.in/dept/HR/TM/LL.M.%202003%20Unit%204.Plea%20Bargaining.RM.pdf>

¹⁵ <https://www.fairtrials.org/plea-bargaining>

¹⁶ <https://www.ojp.gov/ncjrs/virtual-library/abstracts/plea-bargaining-disaster>

Section 265-K provides that the statements and facts stated in the application of the accused shall not be used for any other purpose.

Section 265-L provides that Chapter XXI-A shall not apply to any juvenile or child as defined in Section 2 (k) of the Juvenile Justice (Care & Protection of Children) Act, 2000.¹⁷

However, there is already a provision for compounding of offences in the Criminal Procedure Code. How is it different from plea bargaining? Thus, in compounding, the offended party and the litigant settle a case agreeably throughout a period will the assent of the court. Though, with plea bargaining the issue is settled inside the court in a single sitting.

The distinction between compounding of offence and plea bargaining is lies in the fact that compounding is stigma free because section 320 shall have the effect of acquittal of the accused whereas plea bargaining has some taint of guilt because lesser punishment is awarded in plea bargaining.¹⁸

Plea bargaining as an unconstitutional shortcut

Although, Plea bargaining works under the supposition that any remaining protected shields gave to both the person in question and the charged have not been penetrated (like in the USA) this would be difficult to say in a country where corruption is rampant and the legal machinery is easily manipulated. Hence, victims, witnesses and their families are consistently irritated compromised or forced into dropping charges or evolving articulations. It is hard to envision that thing will be diverse when a blamed, particularly from a rich and powerful foundation, allures for a lesser sentence.¹⁹

Accused incentives for accepting plea bargaining

- 1) Lesser jail term (lighter sentence) for the accused.
- 2) Getting out of jail-

An accused who either do not have right to bail or cannot afford bail (viz. inability to enlist a legal advisor) or who don't fit the bill for discharge on their own recognizance can escape prison. Depending on the offence, the defendant may get out altogether, on probation, or, the defendant may have to serve more time but still get out much sooner than if he chooses to go on trial.²⁰

¹⁷ <https://www.springer.com/gp/book/9780306415777>

¹⁸ *ibid*

¹⁹ *ibid*

²⁰

<https://shodhganga.inflibnet.ac.in/handle/10603/220567>



3) Rapid and more affordable equity purposes quickly. A normal preliminary is tedious and there is lot more stress.

4) Having fewer or less genuine offences on one's record.²¹

5) It assists the accused who with stay as under preliminary detainees anticipating the trial for long time to get quick preliminary with attendant advantages, such as

(a) End of uncertainty;

(b) Saving in prosecution cost; (c) saving in uneasiness cost;

(d) Being ready to know his destiny and to get going new existence unafraid of undergo through a potential prison sentence at a future date disrupting his life or career;

(e) Saving avoidable visits to lawyer's office and to court on each date or dismissal.

6) Having a less socially stigmatizing offence on one's record -

For instance, a prosecutor might diminish a molestation case to an assault. However, this can have a significantly impact on the respondent's relationship with friends and family. Maybe considerably more critical, sometimes defendants indicted of stigmatizing offences may be at a greater risk of being harmed (or killed) in prison than if they are indicted of an offense that doesn't convey the same stigma.

6) Keeping others out of the case-Some respondents concede to assume the fault (sometimes called the "rap") for another person, or to end the case quickly so that others who might be together mindful are not investigated.²²

Demerits in Respect of Accused

1) There is a plausible of innocent defendants conceding on grounds that off extended pre-trial postponements or guilty pleas might be entered upon the guarantee that plea will be acknowledged quickly, and the sentence will be for close to the measure of time previously served.²³

2) If one wishes to avail plea bargaining one should concede and get indicated. Only the quantum of punishment negotiable on the basis of compensation offered to the victim after all of this he has to carry the burden of a 'convict' even for an unimportant offence.

3) At the end He stands stigmatized sometimes he loses employment; in regard to cognizable offences, he might have already suffered detainment as an under trial; he faces exclusion by the society.

²¹ ibid

²² ibid

²³ https://www.law.cornell.edu/wex/plea_bargain

4) Investigating officer always try to get confession through extra constitutional means plea bargaining will be another tool in the hands of police office to close files by getting confession and collecting brownie points.²⁴

5) With a large number of under trials spending years in jails due to the slow pace of trial, sometimes without ever facing a magistrate, a confession in the course of plea bargain is likely to be their best chance of freedom (some justice is better than no justice"). However, that may also amount to waving out their right to a fair trial.

Incentive to victim for accepting plea bargains

1) Victims would be assured of expeditious relief, plus compensation to victims.

2) Assured conviction: -

A) Plea bargaining assures a conviction, even if it is for a lesser charge or crime.

B) Prosecutors might utilize plea bargaining to further their case against a co-respondent. They might accept a plea bargain arrangement from one defendant in return for damaging testimony against another. Thusly, they are guaranteed of like one conviction in addition to improve possibilities of winning a conviction against the second litigant.

3) The result of some random preliminary is normally erratic however a request deal furnishes both indictment and protection with some command over the outcome.

Demerits of plea bargaining in respect of victim

If the accused come from a rich and influential background it is difficult to imagine that victim is not going to bribed to agree to settle for lesser charges or to regularly harassed, threatened or coerced to drop charges.²⁵

Recent case Laws in India

Though, a recent instance of Mumbai, distributed 'In the midst of India' wherein, a Grade-I representative of RBI, was accused for redirecting Rs 1.48 crore from the RBI by giving vouchers against invented names from 1993 to 1997 and transferring the money to his own account. He was captured by the CBI in the year 1997, and released on bail in November that same year. Charges were outlined and case preceded Special CBI Judge. The accused expressed that he is 58 years of age and moved an application of plea-bargaining by taking advantage of the amendment of

²⁴ ibid

²⁵ Garner, Bryan A., ed. (2000). *Black's law dictionary* (7th ed.). St. Paul, Minn.: West Group. p. 1173. ISBN 978-0-314-24077-4.



2005, came into force in 2006. However, the court coordinated the prosecution for its reaction. Hence, the court rejected the application yet from that time, it has opened the entryways and new expectation in the personalities of other accused.²⁶

In other instance of *Vijay Moses Das v. CBI*,²⁶ Uttarakhand High Court (Justice Praffula Pant) in March 2010 permitted the idea of plea-bargaining, wherein accused was charged under area 420, 468 and 471 of IPC. In the said case, Accused provided mediocre material to ONGC and that too at an off-base Port, which made enormous misfortunes ONGC, then, at that investigation was done through CBI by lodging a criminal case of evidence against the accused.

Thus, In any case the way that ONGC (Victim) and CBI (Prosecution) had no issue with the Plea-bargaining Application, the trial court rejected the application on the ground that the Affidavit u/s (265-B) was not recorded by the denounced and furthermore the remuneration was not fixed. The Hon'ble High Court permitted the Misc. Application by guiding the preliminary court to acknowledge the plea-bargaining application.²⁷

Concluding Remarks

Does plea-bargaining sacrifice justice in name of Laster disposal off cases? 'No,' says Mallimath "It's a possibility for a denounced the sentence. Thus, the final result is only a lesser sentence, not acquittal.

Other Reasons in Support

- 1) *The role of judge in plea bargaining is supervisory. It has to make sure that defendant who is pleading guilty is doing so on an intelligent, voluntary manner so that he knows exactly what he is doing.*
- 2) *Implementation of plea bargaining is expected to benefit the huge number of under trials languishing in jails as well as cut down on the backlog of cases which has reached unmanageable proportions.*²⁸
- 3) *plea bargaining would not impact cases where the punishment exceeds seven years, serious offenders would be outside the purview of the system Certain categories of crimes such as crime against ladies and youngsters, and violations, for example, wrongdoing against SCs and STs are likewise barred.*

- 4) *The Indian Penal Code (IPC) prescribes punishment for nearly 400 offences, of which 245 can be sealed through plea-bargaining. These include crimes like: Causing death by rash or negligent act; Rash driving; Defamation; Destruction of evidence; Giving false evidence, Harboring criminal; Rioting, Bribery; Forgery, Criminal intimidation, Misappropriation; Cheating; Impersonation; Criminal trespass; Causing hurt; Assault, assaulting persons of fool authority; Being a member of unlawful assembly, etc.,*²⁹.

Plea bargaining can be supplementary or complementary with efficient justice system because our judicial system is combination both pecuniary and reformative measures but taking into consideration our social structure it does not permit such kind of bargaining. In our country the courts are considered as a position of pride and any sort of idea which fuses bartering is more averse to be acknowledged by individuals everywhere on the grounds that that will transform the courts into a sale house.

Hence instead of accepting this kind system we should try to make our system more efficient by making a minimum requirement of the number of judges in the High Court at any point of time, by constituting pure institutions like fast-track courts and Lok Adalats, by making a minimum time limit requirement for disposal of all kind of cases and by alike measures.³⁰

And also using plea bargaining to reduce the burden of the judicial system is criticized as an argument that is based on administrative considerations rather than legal principles.

It is argued that plea bargaining is soft on criminal as the guilty are not punished property for the crimes they commit. In some manner its amount to confession of guilt of accused person for which appropriate sentence is required to be imposed.... Mere acceptance or admission of guilt must not be ground for reduction of sentence.³¹

Though, the fundamental motivation behind punitive law is to stop, and along these lines forestall commission of offenses. If all the offences punishable with less than seven years rigorous imprisonment could be settled with the criminals that would only increase

²⁶ 585db32a-3e8f-4a0f-a580-2d02778b5bfa.pdf

²⁷ ibid

²⁸ <https://www.sciencedirect.com/topics/social-sciences/plea-bargaining>

²⁹ <http://patnahighcourt.gov.in/bslsa/Bargaining.aspx>

³⁰ <https://www.cliffsnotes.com/study-guides/criminal-justice/defendants-rights/should-plea-bargaining-be-abolished>

³¹ ibid



the crimes thousand-fold and it would also encourage criminals, increase crimes and breed corruption.³²

Suggestions for the implementation of plea bargaining in Indian judicial system

Though, on the off chance that plea bargaining must be executed, first it ought to be carried out in a portion of the minor offenses for the analysis and assuming it is fruitful and reasonable, should be implemented in the whole system and it can be implemented in the modified form as it suits to our system,

We will have to keep in mind the peculiar social fabric and comic condition of our country while considering this practice. In nutshell, while implementing the plea bargaining, we must strike a balance between efficiency and speed the one hand and justice and dignity of court on the other hand.

Further, if plea bargaining has to be implemented in India, then the deciding authority must be independent from trial courts and instead of the public prosecutor retaining most of the power, the independent authority must be given a greater role in the process.³³

³² ibid

³³ <https://www.jstor.org/stable/44306676>



MOBILE PHONE ADDICTION AND PERCEIVED LONELINESS AMONG COLLEGE STUDENTS

Aniljose P. S¹, Archana Baburaj²

¹Assistant Professor, Department of Psychology, Fatima Mata National College, (Autonomous) Kollam

²M.Sc. Student, Department of Psychology, Fatima Mata National College, (Autonomous) Kollam

ABSTRACT

The study of mobile phone addiction and perceived loneliness among the college students, was done in 120 college students from the Kollam district. The major statistical techniques used are Pearson Product Moment Correlation, and independent sample t test. The intercorrelation was assessed between the variables mobile phone addiction and perceived loneliness among male and female college students. Mobile phone addiction is not linked to loneliness. But there is interrelationship between mobile phone addiction and its sub-variables. Hence, mobile phone addiction may influence an individual apt to have loneliness. Regarding the result of the research, it is suggested that in future studies other variables such as aggression, personality characteristics, stress, anxiety should be investigated along with perceived loneliness. Hope that more researchers in the future will be motivated to apply these approaches to the understanding of the new and exciting field of mobile phone addiction and perceived loneliness.

KEY WORDS: Mobile Phone Addiction, Perceived Loneliness, College Students

INTRODUCTION

While many researches have analyzed the psychological antecedents of mobile phone addiction and mobile phone usage behavior, their relationship with psychological characteristics remains mixed. (Hong et al., 2012). In line with the developing technology, the mobile phone use has become a part of daily life. New generation mobile phones enable people not only to talk but also to connect to the virtual networks constantly from anywhere thanks to their computer and internet connection features. Currently, the mobile phones have become an important part of the daily life of the individuals and started to be considered as an imperative tool by the users (Sahin et al., 2013).

Although mobile phones are a very useful tool, their uncontrolled, inappropriate, or excessive use may cause social, behavioral, and emotional problems in adolescents, as well as addiction to mobile phones (Chóliz, 2010, 2012). Mobile phone addiction is considered to be an impulse control disorder similar to pathological gambling but excluding drunkenness (Leung, 2008). When reviewing the literature related to mobile phone addiction, several studies are seen to have been conducted on determining the relationship of mobile

phone addiction with demographic variables such as gender and age; mental health variables such as aggression, depression, and anxiety (Ha, Chin, Park, Ryu, & Yu, 2008; Kim et al., 2015); and shyness (Casey, 2012; Park, 2009) (Hoşoğlu, 2019).

On the other hand, other researchers have suggested loneliness to be a variable associated with mobile phone addiction (Hjenaabadi, 2016; Naderi & Haghshenas, 2009, etc.). Loneliness can be defined as the undesirable experience individuals have when perceiving a conflict between the desired and achieved patterns in their social surroundings (Bhardwaj & Ashok, 2015). Studies examining the relationships between mobile phone addiction and loneliness have indicated a positive relationship between these two variables (Aktaş & Yılmaz, 2017; Beranuy, Oberst, Carbonell & Chamorro, 2009; Reid & Reid, 2007). (Hoşoğlu, 2019),

OBJECTIVES

To examine if there any relationship between mobile phone addiction and perceivedloneliness.

- To find out whether there exists any difference in mobile phone addiction between males and female college students.
- To find whether there exists any difference



in perceived loneliness level between male and female college students.

- To find out whether there exists any difference in mobile phone addiction between college students based on their family.
- To find out whether there exists any difference in perceived loneliness level between college students based on their family.
- To find out whether there exists any difference in mobile phone addiction between college students based on their education level.
- To find out whether there exists any difference in perceived loneliness level college students based on their education level.

RELATED STUDIES

(Ren & Ji, 2019) conducted a study to find out whether there is any relationship between perceived social support and loneliness and also to find out whether the psychological capital has any mediating effects on the relationship between perceived social support and loneliness. The sample was constituted of 694 adolescents (364 males and 330 females) within the age range from 12 to 15 years. The sample was selected through random cluster sampling technique from the six regions of Hunan Province of China. Data was collected by administering Perceived Social Support Scale by Zimet et al. (1990), Psychological Capital Questionnaire by Fan et al. (2015) and Loneliness Scale by Zhou et al. (2012). Pearson Correlation analysis and multiple linear regression analysis were applied for statistical analysis. Results revealed that there is negative correlation between social support and negative correlation was also found between psychological capital and loneliness; these correlations were found to be significant. Psychological capital was found to have significant mediating effects on the relationship between perceived social support and loneliness.

(Andretta & McKay, 2018) conducted a study to examine whether loneliness has significant effect on social, emotional, and academic self-efficacy among school students. The study was conducted in United Kingdom across 12 months. The sample consisted of two independent samples viz. Sample I & Sample II. Sample I consisted of 996 adolescents studying in secondary schools in Northern Ireland. Sample II consisted of 829 adolescents studying in

secondary schools in Scotland. The age ranges of the participants were from 13 to 14 years. Data were collected at baseline and at + 12 months. UCLA Loneliness Scale and Self-Efficacy Questionnaire for Children (SEQ-C) were administered for collecting data. Descriptive statistics, correlation and ANOVA were computed for statistical analysis of the data. Result showed higher level of loneliness at 12 months as compared to baseline in case of both male and female adolescents. It also revealed that loneliness do not predict academic and emotional self-efficacy. In case of female loneliness plays a greater risk on social self-efficacy.

(Nayar et al., 2018) conducted a comparative study on depression, anxiety and perceived loneliness between hostellers and day boarders. The sample was consisted of 80 adolescents (only male adolescents) studying from class VI to class XI. Out of 80 adolescents, 40 were hostellers and 40 were day boarders. The age range of the sample was from 11 to 17 years. Data were collected by administering the UCLA Loneliness Scale, Screen for child anxiety related disorders (SCARED, child version), 11- Item Kutcher Adolescent Depression Scale: KADS 11. Chi-square test was applied for statistical analysis of the data. Result showed significant difference in the panic disorder and loneliness between hostellers and day scholars. But no significant difference was found in SCARED (Screen for child anxiety related disorders), GAD, Separation anxiety, Social anxiety, School avoidance between hostellers and day scholars.

METHOD

The descriptive research design was used for this study; it helps to provide answers to the questions of who, what, when, where, and how associated with a particular research problem; Descriptive statistics are often designed and structured to examine the characteristics depicted in research questions (Neumann, 2003).

In the present study, a purposive sampling method was used. The sample selected for the study consists of 120, including 60 males and 60 females, pursuing undergraduate or postgraduate courses from various colleges across Kerala. Google form was used to collect data from the samples.

The measures used was Mobile Phone Addiction Scale (Velayudan & Srividhya, 2012) and the Perceived Loneliness Scale (Dr. Praveen Kumar jha, 1997)



RESULTS AND DISCUSSION

Table 4.1: The intercorrelation coefficients mobile phone addiction and perceived loneliness level among male and female college students. Results of Pearson’s ProductMoment Correlation Analysis.

Sl.No.	Variable	1	2	3	4	5	6	7	8
1.	Maladaptive usage	()	.421**	.331**	.597**	.441**	.645**	.703**	0.070
2.	Self-expression		()	.472**	.464**	.336**	.522**	.697**	.118
3.	Peer relationship			()	.543**	.361**	.594**	.795**	.016
4.	Interpersonal relations				()	.332**	.618**	.786**	.100
5.	Impulsivity					()	.431**	.589**	.018
6.	Usage time						()	.835**	.008
7.	Mobile							()	.045
10.	Loneliness								()

** Correlation is significant at 0.01 level (2-tailed)

From table no;1 it indicates that there is no correlation between mobile phone addiction and perceived loneliness among college students, rather there exist an inter- correlation between the subscales of mobile phone addiction (maladaptive usage, self-expression, peer relations, interpersonal relationships, impulsivity, usage time). A positive inter-correlation is found between maladaptive usage and self-expression ($r = .421^{**}$, $p = .01$), maladaptive usage and peer relations ($r = .331^{**}$, $p = .01$), maladaptive usage and interpersonal relationships ($r = .597^{**}$, $p = .01$), maladaptive usage and impulsivity ($r = .441^{**}$, $p = .01$) maladaptive usage and ($r = .645^{**}$, $p = .01$).

Thus, the hypothesis that there will be no significant relationship between mobile phone

addiction and perceived loneliness among male and female college students was accepted. (Paul & Vashisht, n.d.)

Result of t test

The t-test of the significant difference between means of large independent samples is used to compare the means between any two groups on any of the variables.

The main objective of the study was to find out whether any significant difference exists between the main study variables; Mobile phone addiction and perceived loneliness concerning gender, family type and educational status.



Table 4.2 Difference in the study variable based on gender and mobile phone addiction.

Variables	gender	N	Mean	SD	t value
Mobile phone	Female	60	87.62	14.44	-1.37
Addiction	Male	60	91.27	14.74	

Table 2.1 shows the N, mean, SD, standard error mean, t value, and significance of mobile phone addiction concerning gender. By observing the mean value of males and females, it is clear that there exists no significant difference with mobile phone addiction concerning gender. The t value is ($t = -1.37$, $p > .05$). The mean score of females (87.62) is lower

than the mean score of males (91.27). It shows that females and males did not differ significantly in terms on mobile phone addiction (Pawłowska & Potembska, 2011)

Thus, the hypothesis that states there is no significant difference in mobile phone addiction concerning the gender are accepted.

Table 4.3 Difference in the study variable based on gender and perceived loneliness.

variables	gender	N	Mean	SD	t value
Perceived loneliness	Female	60	110.27	14.53	1.52
	male	60	106.50	12.36	

The mean, SD, t-test, and significant level of perceived loneliness among males and females are shown in Table.2.2. The findings reveal that there is no significant difference between perceived loneliness and gender. Perceived loneliness among females has a mean score of 110.27 which is lower than the mean score of males 106.50 and the t value ($t = 1.52$, $p > .05$) and corresponding deviation are 14.53 and 12.36, respectively was found to be not

significant. (Jain, 2017) found that Male adolescents perceived more Loneliness than the Females; whereas several other studies found that Females perceived more Loneliness than the Males.

Thus the hypothesis that states there is no significant difference in perceived loneliness concerning the gender are accepted.

Table 4.4 Difference in the study variable based on mobile phone addiction and different family in our society

Variable	family	N	Mean	SD	t value
Mobile phone Addiction	Joint	21	92.90	18.11	1.19
	Nuclear	99	88.71	13.80	

The sample size, mean, SD, standard error mean, t value, and significance of mobile phone addiction with family type are shown in the table 2.3. It is obvious from looking at the table it is clear there is no significant difference between mobile phone addiction and family type. While observing the mean of nuclear and joint family type 92.90 and 88.71 and the corresponding deviation are 18.11 and 13.80 and

respectively the t value $t = (1.19)$ was not significant.

Thus the hypothesis that there is no significant difference between mobile phone addiction and family type among college students is accepted (Xie et al., 2019).



Table 4.5 Difference in the study variable based on perceived loneliness and different family in our society

variables	family	N	Mean	SD	t value
Perceived loneliness	Joint	21	10.45	10.45	-.389
	Nuclear	99	14.17	14.17	

The sample size, mean, SD, standard error mean, t value, and significance of perceived loneliness with family type are shown in the table 2.4. It is obvious from looking at the table it is clear there is no significant difference between perceived loneliness with family type. While observing the mean of nuclear and joint family type 10.45 and 14.17 and the corresponding deviation are 10.45 and 14.17 and respectively the t value ($t = -.389, p > .05$) was not to be significant. (Hangul, 2015) where the

study on Perceived Loneliness and social Adjustment among adolescents of Middle income families residing in Guwahati found that there is no significant difference between Male and Female adolescents in case of their Perceived Loneliness level and also that Perceived Loneliness is negatively related with Social Adjustment.

Thus, the hypothesis that there is no significant difference between perceived loneliness and family type among college students is accepted.

Table 4.6 Difference in the study variable based on mobile phone addiction and different education level.

Variables	Education	N	Mean	SD	t value
Mobile phone Addiction	Graduation	62	89.44	16.39	-.05
	Post- graduation	58	89.45	12.66	

The table 2.5. shows the significant difference between mobile phone addiction and based on educational level. Results from the table shows that mobile phone addiction does not show any significant difference with based on educational level among college students. By observing the mean of educational level graduation and post -graduation is 89.44 and 89.45 and the corresponding deviation are 16.39 and 12.66 and the t value ($t = -.05, p > .05$) was not to be significant. Mobile phone addiction has no significant effect on student's

academic achievement. The findings conclude that mobile phone addiction decreases academic performance of students as students lower their focus on academic learning and get addicted to mobile phones for cyber loafing.

Thus the hypothesis that there is no significant difference between mobile phone addiction based on educational level among college students is accepted. (Babadi-Akashe et al., 2014)

Table 4.7 Difference in the study variable based on perceived loneliness and different education level.

variables	Education	N	Mean	SD	t value
Perceived loneliness	Graduation	62	110.24	12.84	1.56
	Post- graduation	58	106.40	14.13	

The table 2.5. shows the significant difference between perceived loneliness based on educational level. Results from the table shows that mobile phone addiction does not show any significant difference with based on educational level among college students. By observing the mean of educational level graduation and post -graduation is 110.24 and 106.40 and the corresponding deviation are 12.84 and 14.13 and the t value ($t = 1.56, p > .05$) was not to be significant. This is especially significant for young

people as feelings of loneliness and isolation are known to negatively impact students.

Thus the hypothesis that there is no significant difference between perceived loneliness based on educational level among college students is accepted (Bruehlman-Senecal et al., 2020).

SUMMARY

Mobile phone addiction is not linked to loneliness. But there is an interrelationship between



mobile phone addiction and its sub-variables. When the students are addicted to mobile phones it may indirectly cause someone to feel lonely. This is because loneliness is an undesirable feeling that derives from inconsistency between wished and accomplished levels of social connection. Hence, mobile phone addiction may influence an individual apt to have loneliness.

CONCLUSION

1. There will be no significant relationship between mobile phone addiction and loneliness. But there is an inter-relationship between mobile phone addiction variables and its sub variables.
2. There is no significant difference in mobile phone addiction between male and female college students.
3. There is no significant difference in perceived loneliness level between male and female students.
4. There is no significant difference in mobile phone addiction between different types of families in our society.
5. There is no significant difference in perceived loneliness level between different types of families in our society.
6. There is no significant difference in mobile phone addiction between college students based on their education level.
7. There is no significant difference in perceived loneliness between college students based on their education level.

Mobile phone addiction is one of the severe technology addictions which had become serious problems these days especially to students. The present study entitled "Mobile phone addiction and perceived loneliness among college students" attempted to explore and analyze the relationship between mobile phone addiction and perceived loneliness among college students. From the correlation coefficient of the study, it is observed that there is a positive interrelationship between mobile phone addiction and its sub variables. Further the study also attempted to find out the difference in mobile phone addiction and perceived loneliness on the basis of the course of their gender, education, family type. But there was no difference in mobile phone addiction and perceived loneliness among college students on the basis of gender, education, family types.

IMPLICATIONS OF THE STUDY

The present study was designed to understand and find out the relationship between mobile phone addiction and perceived loneliness among college students. The findings of mobile

phone addiction and perceived loneliness is aimed to understand any relationship between these 2 variables. The result of the study showed that there is no relationship between these two variables but there is inter-relationship between mobile phone addiction and perceived loneliness. That means the students who are addicted to mobile phones may indirectly cause someone to feel lonely. In this study the result shows no difference in mobile phone addiction and perceived loneliness on the basis of the course of their gender, education, and types of family.

LIMITATIONS OF THE STUDY

1. The current study is only in a limited number of samples (120).
2. The participants of the study were only from specific districts from Kerala.
3. Faking of response and response bias by the participants may have impacted the result.
4. The study was conducted online and thus there exists an uncertainty over the validity of the data and sampling issues.

SCOPE FOR FURTHER RESEARCH

In the present study, the sample consists of a very limited number of college students. Therefore, the generalization of the result is limited. These samples could consist of participants from different areas, from different socio-economic environments.

It will help the researchers to find the relationship between mobile phone addiction and perceived loneliness. The study could be conducted by taking one type of institution whether government and institutions and private institutions. The same study can be conducted on schools also for broader generalization. In this study the findings are based on mobile phone addiction and perceived loneliness. Regarding the result of the research, it is suggested that in future studies other variables such as aggression, personality characteristics, stress, anxiety should be investigated along with perceived loneliness. Hope that more researchers in the future will be motivated to apply these approaches to the understanding of the new and exciting field of mobile phone addiction and perceived loneliness.

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SELF-LEARNING MODULES (SLMs) IN TLE: AN ANALYSIS OF THE VIEWS AND PERCEPTIONS OF TLE TEACHERS

Marites B. Alam

ABSTRACT

The Coronavirus pandemic has steered a lot of what the people were used to do outside their home, and learning of students amidst the possible limitations have been no exception. Everyone is forced to adapt in these trying times especially in the Education sector. DepEd or Department of Education come up of implementing modalities that can help student go through their studies. There are various strategies introduced but SLM's or Self-Learning Modules have been the option of certain institutions. In this study, the researcher has found out that:

Out of twenty-five (25) TLE teacher-respondent, the views and perceptions of teachers on their preferred number of days on using modules in the teaching-learning process of TLE Teachers has been observed. Forty-four percent (44%) of the teacher-respondent chose five days a week. Thirty-six percent (36%) of the teacher-respondent preferred four days a week. And there are only twenty percent (20%) preferred to use SLM's three days a week during the time of the study.

The Self-Learning Modules (SLMs) in TLE helps develop good behavior and can focus to their academic performance. As supported by the overall mean of 4.44 and standard deviation of 0.829, it is clearly indicated that the effect of modules among the respondents in accordance to the teaching-learning process have a remark of strongly agree and verbally interpreted as very great extent.

The preferred activities and exercises in the teaching-learning process of the TLE Teachers is more focused in the skills of the students. Out of twenty-five (25) TLE teacher-respondent, ninety-two percent (92%) shared their insights that it is better if they implemented skill focused activities and exercises. Moreover, there are eighty-four percent (84%) agreed that cognitive focused activities and exercises are also effective. Sixty-eight percent (68%) of the teacher-respondent however agreed that affective focused activities and exercises during the time of the study should be implemented.

INDEX TERMS — Perceptions, Self-Learning Modules, TLE, Views

1. INTRODUCTION

The Coronavirus pandemic has turned the spotlight on one of the problems in the education system, making education accessible to all, under any circumstances.

Steadfast in its preparation for School Year 2020-2021, the Department of Education (DepEd) provides Self-Learning Modules (SLMs) with the alternative learning delivery modalities to be offered for various types of learners across the Philippines.

The integration of SLMs with the alternative learning delivery modalities (modular, television-based, radio-based instruction, blended, and online) will help DepEd ensure that all learners have access to quality basic education for SY 2020-2021 with face-to-face classes still prohibited due to the public health situation.

The SLMs and the other alternative learning delivery modalities are in place to address the needs, situations, and resources of each and every learner and will cover all the bases in ensuring that basic education will be accessible amid the present crisis posed by COVID-19.

On the other hand, with subjects that requires laboratory and enhancement of skills like TLE in mind, DepEd secured that learners will have the same resources as well as assigned teachers

that will guide them throughout their lessons.

As the K to 12 curricula gave importance to Technology and Livelihood Education (TLE) subject during high school and with prevailing circumstances, development and provision for self-learning modules are also applied in TLE subjects this school year.

As the importance and necessity of self-learning modules in TLE were discussed and identified, the researcher, as one of the TLE teachers of the Laboratory Junior High School believes that views and perception of TLE teachers can greatly contribute to the development of more creative and productive work among the students. The findings of this study may be very useful in improving instruction and competencies of both teachers and students under the K-12 curriculum. The school administrators may also be provided baseline information in designing appropriate training for other TLE teachers in the development and validation of their own learning modules based on their respective areas of specialization that may contribute to the vocational-technical competency of high school students.

Thus, this research is carried out to analyze the views and perceptions of TLE teachers on the use of a teaching module, as



well as to reveal the extent to which the respondents actually utilize the module in the teaching learning process, the types of activities and exercises preferred, and whether the respondents really find the needs to use a module.

2. OBJECTIVES

The traditional curriculum and teaching approaches focused on the lecturer rather than the learner. However, recently, due to pandemic, there has been a paradigm shift which moves the emphasis from teaching to learning and a more student-centered curriculum to modular approach. Specifically, the researcher sought to find out the:

1. Understand and analyze the views and perception of TLE teachers on the use of self-learning modules (SLMs) in teaching TLE.
2. Measure the effect of modules among the respondents in accordance to the teaching-learning process
3. Identify the types of activities and exercises preferred by TLE teachers; and
4. Identify whether the respondents really find the needs of using SLMs in TLE.

3. METHODOLOGY

The respondents of the study will compose of secondary TLE junior high school teachers from Gov. Felisicimo T. San Luis Integrated Senior High School.

This research will utilize purposive sampling technique. Achieving the goals of such qualitative research designs requires different types of sampling strategy and sampling technique. Purposive sampling is useful in this instance because it provides a wide range of non-probability sampling techniques for the researcher to draw on.

The title will be presented to the panel members. Upon approval, the researcher will gather all the necessary data on the analysis of the views and perception of TLE teachers on the use of self-learning modules (SLMS) in TLE.

The instrument to be used in the study will be a survey questionnaire-checklist. The questionnaire is a research-made instrument devised to answer the objectives of the study.

In the construction of questionnaire described above, an extensive review of various books, publications and internet sites will be used. An initial draft of the research tool will be prepared and presented to panel members for comments and suggestions. Validation will be used to assess the representation of the items with those of others dealing with same area of investigation. The assistance experts relevant to the contents of the questionnaire will be solicited,

The final form of the questionnaire will be reproduced and administered to respective respondents.

A meeting will be set to meet the respondents before the actual administration of the questionnaire in order to orient them relative to the purpose of the study. The respondents will also be oriented on how to accomplish the entire set of questionnaires.

The distribution and retrieval of questionnaire will be

administered personally by the researcher in order to follow-up vague responses made by the respondent for consistency check. The researcher will explain fully the direction as well as the purpose of the study before allowing the respondents to answer the questionnaire.

Later, the data will be gathered, given appropriate statistical treatment, which were analyzed and interpreted.

4. LITERATURE REVIEW

Due to COVID-19 outbreaks worldwide, the academic institutions have been enforced to entirely cancel face-to-face teaching including laboratories and other learning experiences as a mitigation step against the risk posed by the Coronavirus. Accordingly, various measures by the department of Education providers have been initiated to implement social isolation strategies, and online teaching is followed with rapid curriculum transformation. Thus, Self-Learning Modules were produced and utilized in various subject areas including TLE.

Toohy (2015) designed a module to forge educationally sound and logical links between learner's needs, aims, learning outcomes, resources, learning and teaching techniques and strategies, criteria of assessment and evaluation. This provides brief overview of the process, highlighting the crucial variables in module design and finding the relationships between them. Seeking to incorporate the following to TLE teachers' module design can offer a more preponderant likelihood of fostering a deep approach to learning.

These ideas vibrate with teachers in today's secondary education environment and have implications both for the choice of learning and teaching strategies and how to assess learning. An awareness of these approaches to learning is fundamental to the entire module design process.

Jayasree (2015) mentioned that the use of self-learning modules in teaching is another form of individual used instructions. This is called modular approach of teaching and learning. In older times, if self-learning modules are available on some topics they can be given to the students as assignments for self-learning. On the other hand, nowadays, LSM's and modular approach are used as primary mode of education in the country

The concept of "module" is strictly linked to the idea of a flexible curriculum. Taneja (2017) defined module as a unit of work in a course of instruction that is virtually self-contained and a method of teaching that is based on the concept of building up skills and knowledge in discrete. A module is a set of learning opportunities organized around a well - defined topic which contains the elements of ordinate dictation, categorical objectives, edifying cognition activities, and evaluation utilizing criterion.

A module covers either a single element of subject matter content or a group of content elements composing a discrete unit of subject matter or area of adeptness. A module has placidly defined, objectives; preferably in behavioral form. In addition, it is defined as varieties of teaching methods that will fixate on cumulating methods that can best realize the creative and constructive engagement with learning activities that leads to



understanding. Even very good designed modules, with very well-defined learning outcomes, can fail if the edification strategies employed are infelicitous to inspire and support the learners towards meeting the desired learning outcomes.

Toohey (2015) offers the following definition: “A teaching strategy is a plan for learning, and it includes the presentations which the teacher might make, the exercises and learning activities designed for students, instructional aids which will be supplied or suggested for students to work with, in which they show of their growing understanding and capability will be collected.” Modular teaching is one of the most widespread and recognizes teaching learning techniques in many countries including other Western countries and Asian region. Modular approach is used almost in all subjects like natural science, specifically in TLE.

Self-Learning modules consider the individual differences among the learners which necessitate the planning for adoption of the most appropriate activities and exercises. in order to help the individual grow and develop at her/his own pace (Kandarp, 2013).

The utilization of such packages takes into account individual differences and sanctions students to work at their own pace.

However, it is a process of understand and then express the idea or knowledge. One of the largest changes in recent years has been the addition of technology education facilities with individualized instructional modules. Each module has a distinct training element; it covers either a single element of subject matter content or a group of content elements objectives; preferably in behavioral form. A recognized level of proficiency or a qualification can be achieved through the completion of a series of modules.

In addition, it is found that using individualized instructional modules reduces the time it takes teachers to develop a technology-based program. Module developments promote practice to plan and develop modular materials. Module writers develop a common frame work for the design and development of modular materials. In designing modules, it is essential for teachers to be aware of concepts of deep and surface approaches to learning. Many researches have previously been conducted on the relationship between courses and the approach students take to learning and found positive relationship between curriculum and learning approaches.

Thus, the goal of the modules is to provide resources to teachers that will allow them to transform their teaching into active, student-centered learning environments.

5. DISCUSSION

The responses will be tabulated as basis for statistical treatment of the data. This was done in order to determine and analyze the views and perception of TLE teachers with the use self-learning modules (SLMS’) in TLE.

In order to analyze and interpret the data gathered, the following statistical tools were utilized in the study. Frequency Distribution, percentage, weighted mean, standard deviation, will be used in this research.

Various issues were raised by public school teachers in the field regarding the preparation for modular learning. Based on the reports, teachers are raising a “myriad of issues” with the modular learning preparations which is being aggravated by the present health crisis. In particular, cited concerns of teachers are from the National Capital Region (NCR) and some provinces in Region IV-A (CALABARZON) – which are currently placed under the Modified Enhanced Community Quarantine (MECQ).

In addition, based on DepEd’s latest enrollment data, these two regions have the highest number of enrollees for School Year (SY) 2020-2021) out of the 17 regions. With this regard, module reproduction print modules that were developed by schools and divisions as the promised material from the Central Office (CO) remain unavailable.

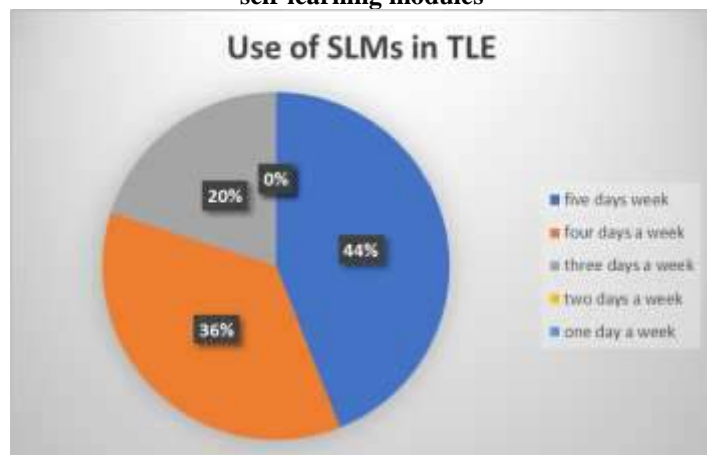
But sadly, teachers expressed disappointment that while teachers have been tasked to make the activity sheets that will come with the modules, not enough copies are seen of these modules, forcing them to just base the activity sheets on last year’s lessons.

Teachers also pointed out that “reproduction cost is also a big problem as schools were forced to find ways to raise funds in so short a time.

With the schools’ Maintenance and Other Operating Expenses (MOOE) almost depleted, schools’ resort to soliciting private donations and maximizing teachers’ personal printers just to jumpstart the reproduction of instructional materials and modules.

Also, teachers are sometimes even being made to report to school as late as 11:00 pm as their school or division implements a shifting schedule for teachers in order to finish the printing on time. Considering the imposition of MECQ in NCR and nearby provinces and the worsening health crisis preventing safe movement of teachers and staff, DepEd’s module preparation will further impose possible health problems to teachers. Further research is needed in order to develop more targeted ethical frameworks regarding this study.

Figure 1. Views and Perception of TLE teachers on the use of self-learning modules



Out of twenty-five (25) TLE teacher-respondent, forty-four percent (44%) of the teacher-respondent settled that the effect of using modules in the teaching-learning process of the TLE Junior high school teachers from Gov. Felisicimo T. San Luis Integrated Senior High School will be more effective if implemented five days a week. Thirty-six percent (36%) of the teacher-respondent however settled that the effect of using module in the teaching-learning is preferably four days a week. Overall, there are only twenty percent (20%) of the teacher-respondent settled that the effect of using module in the teaching-learning should be implemented three days a week during the time of the study.

This means that the views and perceptions of teachers on their preferred number of days on using modules in the teaching-learning process of TLE Teachers is well monitored and implemented if they maximize the weekdays of which the students have been practiced in the face-to-face classes.

Table 1.1. Effect of modules among the respondents in accordance to the teaching-learning process

Statements	Mean	SD	Remarks
The use of modules helps students develop study habit.	4.55	0.83	Strongly Agree
The use of modules helps students develop focus and concentration	4.60	0.68	Strongly Agree
The use of self-learning modules helps students learn self and performance evaluation.	4.50	0.76	Strongly Agree
The use of modules helps students develop control and independence	4.45	0.89	Strongly Agree
The use of modules helps students develop good academic behavior	4.60	0.75	Strongly Agree
Overall Mean = 4.44			
Standard Deviation = 0.829			
Verbal Interpretation = Very Great Extent			

Legend

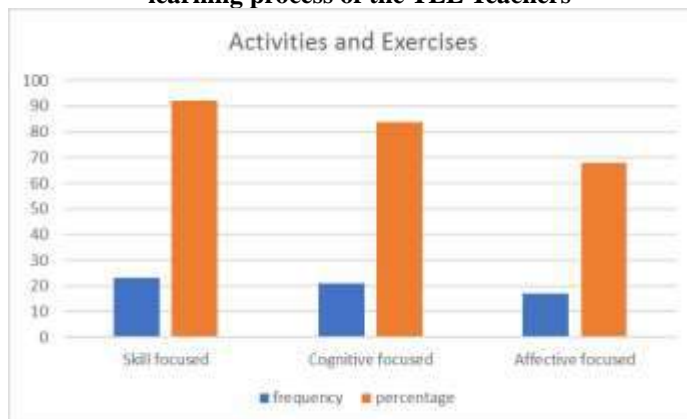
Scale	Range	Remarks	VI
5	4.20-5.00	Strongly Agree	Very Great Extent
4	3.40-4.19	Agree	Great Extent
3	2.60-3.39	Moderately Agree	Moderately Extent
2	1.80-2.59	Disagree	Low Extent
1	1.00-1.79	Strongly Disagree	Very Low Extent

To a very great extent, the use of modules helps students develop focus and concentration and helps students develop good academic behavior obtaining (M = 4.60, SD = 0.68,) and the modules helps students develop study habit acquiring (M = 4.55, SD = 0.83). Although also observed to very great extent, the item with the lowest rating was on use of modules helps students develop control and independence with (M = 4.45, SD = 0.89).

The overall mean of 4.44 and standard deviation of 0.829, indicated that the effect of modules among the respondents in accordance to the teaching-learning process have a remark of strongly agree and verbally interpreted as very great extent. The

finding shows that the Self-Learning Modules (SLMs) in TLE helps develop good behavior and can focus to their academic performance.

Figure 2. Preferred activities and exercises in the teaching-learning process of the TLE Teachers



Out of twenty-five (25) TLE teacher-respondent, ninety-two percent (92%) of the teacher-respondent in the teaching-learning process of the TLE Junior high school teachers from Gov. Felisicimo T. San Luis Integrated Senior High School agreed that it is better if they implemented skill focused activities and exercises. Moreover, there are eighty-four percent (84%) of the teacher-respondent in the teaching-learning process agreed that cognitive focused activities and exercises are also effective. On the other hand, sixty-eight percent (68%) of the teacher-respondent therefore agreed that in the teaching-learning process of the TLE Teachers, affective focused activities and exercises during the time of the study should be implemented.

This means that the preferred activities and exercises in the teaching-learning process of the TLE Teachers is more focused in the skills of the students.

Figure 3. Extent of needs of using SLMs' in teaching TLE



One hundred percent (100%) of the teacher-respondent settled that the extent of needs of using SLMs' in teaching TLE of Junior high school teachers from Gov. Felisicimo T. San Luis Integrated Senior High School is to a very great extent. While the



other to a great extent, to a moderate extent, to a low extent and to a very low extent have no response during the time of the study. This means that there is a very great extent of needs of using SLMs' in teaching TLE.

6. RECOMMENDATION

As per the conduct of the study. It is recommended that:

The schools and teachers must continue to nurture their partnership among the students and their family and vice versa. This will at least prevent adding up problems and ease the hard and trying times everyone is currently facing, SLM's should be continuously improved and if possible, consistent surveys are given to further expand the possible knowledge students must acquire. This will also prevent students from being tired, exhausted and spent.

7. CONCLUSIONS

In a short span of time, (COVID-19) has changed how institutions, teachers and students acclimate the current means of education. These progressions give everyone a glimpse at how education could improve and adjust when inevitable circumstances arise. Compared to the traditional curriculum, the researcher has observed that emphasizing a more student-centered curriculum to modular approach.

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THE PROFILE, THE PERSPECTIVES, AND THE NEEDS OF RURAL WOMEN IN THE 4TH DISTRICT OF LAGUNA

Julie Rose P. Mendoza, Ed. D.¹, Benjamin O. Arjona, Ed. D.²

ABSTRACT

Agriculture, being the backbone for most developing countries, is one source of income for almost every rural woman in the world. These women live in remote areas and don't have access to internet or sometimes even mobile phones. They do not have enough information about agricultural practices and this alone, causes a problem. If a woman doesn't have access or any resources, all the programs in the world can't help them in any way.

This study focused on Phase 1 of which determined the profile, the perspectives and the needs of rural women in the 4th district of Laguna. Moreover, the study's primary goal is to help provide training, development programs and activities to the rural women in the 4th District of Laguna towards personal development and possible preparedness in various life's situations/incidences.

This research is a survey or descriptive in nature. There are 16 towns in the 4th district of Laguna, and 294 barangays. The team purposively selected all towns within the 4th district and at least 2 barangays in each town represented the women of the 4th District of Laguna in the conduct of this research. The study revealed that, the Needs assessment of the Profile, the Perspectives and the needs of Rural Women in the 4th district of Laguna with regards to Trainings, Development Programs and Activities, acquired the total frequency of 498 with a total percentage of 100. The Basic Communication & Literacy Skills received the highest response of seventy-four (74) or 14.86% of the total respondents. Followed by the Sustainable Livelihood Development Program; Baking, Basic Sewing, Cosmetology with sixty-two (62) or 12.45% of the total respondents. While the Good housekeeping (The 5S of good housekeeping: 1 Sort (SEIRI), 2 Systematized (SEITON), 3 Sweep (SEISO), Sanitize (SEIKETSU), and 5 Self-discipline (SHITSUKE); House Cleaning Tips and Maintenance got the lowest frequency of thirty-nine (39) or 7.83 of the total respondents.
INDEX TERMS — Rural Women, Sustainable Livelihood Development Program

1. INTRODUCTION

Majority of Filipino rural women are found in the countryside or "laylayan" like the 4th District of Laguna Province. These women are found to be engaged in planting, livestock and poultry production, while some have nothing to do. Hence, these women opt out to work as a laborer receiving the lowest paid, according to 1975 survey.

There are different factors that influence this situation. Most of these women do not have enough education to be able to work professionally. Some of them lack skills to be able to perform specific tasks. Some simply lack awareness and settle with a simple life. Thus, it cannot be denied that needs assessment of these rural women should be made and programs must be initiated to promote literacy and empowerment.

In addition, inequalities in access to resources and entitlements have made women the poorest of the poor. Poor women have fewer social, economic, political rights, including rights of access to such essentials as health care and education, lower economic return for their work, have multiple burden, as well as care for children and the elderly.

The needs for support to these women should be given emphasis. Thus, this research will focus on personal and community development of rural women in order to promote and enhance their knowledge and skills as women in the family as

well as in their community.

This study investigated the current condition of rural women particularly in the 4th District of Laguna, and the result of this study may be used as basis for program or programs that may alleviate the economic condition and dignity of these women as members of the society.

2. OBJECTIVES

The researchers' primordial goal is to help provide training, development programs and activities to the rural women in the 4th District of Laguna towards personal development and possible preparedness in various life's situations/incidences

Specifically, the College of Teacher Education sought to find out the:

1. Clientele's Profile with regards to their age, civil status, number of siblings, monthly income, and educational background.
2. Level of perspective of Rural Women in the 4th district of Laguna in terms of Human Rights, Health Care Access, Standard of Living, Gender Equality, and Education.
3. Needs assessment of the Profile, the Perspectives and the needs of Rural Women in the 4th District of Laguna



with regards to Trainings, Development Programs and Activities

3. METHODOLOGY

This research is a survey or descriptive in nature. This program included three (3) projects composition namely: 1. Profile, perspective and needs assessment of rural women, 2. Extension programs focusing on personal and community development, and 3. Monitoring and re-assessment. This research focused in the first phase of the program.

During phase 1 of which focuses on the needs assessment of rural women, the team identified the rural women who may provide substantial information regarding their perspectives as mothers and wives who live in a rural community. Their profile includes age, social economic status, educational qualifications, source of income and number of family members. Finally, during the survey, their needs as mothers and as wives were also included in the survey.

There are 16 towns in the 4th district of Laguna, and 294 barangays. The team purposively select all towns within the 4th district and at least 2 barangays in each town were used to represent the women of the 4th District of Laguna in the conduct of this research.

This research was conducted in sixteen (16) towns with at least two (2) barangays in the fourth district of Laguna. The first step is securing permission from the respective municipalities then conduct the orientation and survey in each pre-selected barangay.

During Phase 1, rural women were identified. They are women residence of barangays. They may be housewives, farmers, or with temporary job or source of living. The survey included their profile, perspectives and personal and community needs for development. Each week, one town was surveyed. The rural women were interviewed for confirmation of the data being surveyed/collected. There were members of the CTE faculty to be involved in the survey of data for its completion. After the completion of data collection, analysis was done, with the corresponding conclusions and recommendations. As mentioned above, this research focused in the first phase of the project.

During phase 2, the recommendations will be scrutinized for possible extension proposal where the rural women will be extended services like dissemination of information on awareness, lectures on some topics related to the research conducted like empowerment, proper waste management, good housekeeping among others.

During phase 3, there will be monitoring of the progress and re-assessment on personal and community development of the rural women as regards to the assistance extended by the CTE faculty.

After the time allotted, the responses were collected, assessed, recorded and analyzed. The results were obtained in (3) three parameters (rural women profile, perspective and needs assessment) were evaluated.

4. LITERATURE REVIEW

Filipino women carry the unwavering burden as their sisters in the rest of the developing world. The conditions

obtaining in a backward, dependent economy oblige most of them to live under conditions of poverty, inequality and justice. Some doors of opportunity and advancement are still unwelcomed for women unless they belong to the upper class of which is 8%, in other crops, livestock and poultry production which is almost 7% and sugarcane farming with only 4% of the total population [1]. Many women are worse off today than they were five years ago, particularly those in rural areas and these deteriorating situations are attributed mainly to the current world economic crisis which has affected women seriously by increasing their unemployment and cutting back on essential services.

Good Housekeeping involves the principle of waste elimination through workplace organization. The Japanese words seiri, seiton, seiso, seiketsu, and shitsuke when translated in English can be roughly translated as sort, set in order, clean, standardize, and sustain. The cornerstone of 5S is that untidy, cluttered work areas are not productive. As well as the physical implications of unwanted items getting in everybody's way and dirt compromising quality. Women, known to be with these attributes, should be fully informed of how these works and to further improve their ability. Without the necessary skills to carry out specialized cleaning tasks in a safe and efficient manner, rural women will find the amount of work and its level of detail too overwhelming to conquer.

According to [2], good housekeeping also provides the foundation for all quality improvement programs. It is a process to create more productive people and more productive companies through motivation, education, and practice. It involves the creation of a strong corporate culture with a productivity mindset. Quality housekeeping takes a lot of effort; much of that effort should be focused on cleanliness which is consistent and on schedule, before the residents return from their daily activities. These would be one great opportunity for rural women as they are experienced in maintaining the organization and cleanliness of their homes.

[3] stated that, rural women are key agents for attaining the transformational economic, environmental and social changes needed for sustainable development, of which involves Proper Waste Management. Attention should be paid in developing and transition countries, where the unsustainable management of solid waste is common. Differences should be highlighted between developing big cities and rural areas, where management issues are different, specifically regarding the amount of waste generated and the waste management facilities available. Being knowledgeable to Proper Waste Management would help the disregarded women to stand up and guide everyone for a better and clean environment.

On the other hand, prevention focuses on creating concrete plans, training and exercises well ahead of a disaster to prepare your organization. Emergency planning activities will allow organizations to reduce loss of life and sustain environmental challenges by developing organizational specific plans, standardized planning tools and emergency management protocols. If a woman knows how to lead and informed her colleagues, with also having the woman's nature of being initiative, every single person in the community would be more



than willing to cooperate.

[4] Further stated that although women are underrepresented in the ranks of power, too many evidences are founded on the misconception that women ought to emulate men.

According to the World Bank, providing life skills enables individuals to effectively deal with the demands of everyday life. It also fosters their critical thinking early on about how gender norms and human rights guide their interactions with others. These skills are especially crucial during adolescence, a stage in which emotional and physical changes take place and critical life questions are raised.

The empowerment and autonomy of women and the improvement of their political, social, economic and health status is a highly important end in itself. In addition, it is essential for the achievement of sustainable development. The full participation and partnership of both women and men is required in productive and reproductive life, including shared responsibilities for the care and nurturing of children and maintenance of the household. In all parts of the world, women are facing threats to their lives, health and well-being as a result of being overburdened with work and of their lack of power and influence. To promote gender equality and the empowerment of women as effective ways to combat poverty, hunger and disease and to stimulate development that is truly sustainable.

According to Electrician's Career Guide, there are only few female electricians in the world but their experiences in work is largely positive. Female electricians tend to find no difficulty when it comes to finding a company for their training because trade unions want to employ a diverse workforce, and many actively recruit women and minorities to join. Being a man would be a great advantage because of their built but electricians often need to fit into crowded or small spaces, and a petite frame may allow to get to places that a bigger frame could not get to. This clearly implies that, a woman having knowledge in basic electrical wiring would be a great help for them especially if they are single mothers. In the event, that they have spouses that can help them out, a simple and basic electrical would be done without a man's help. A woman finds the sense independence of they are equipped with enough knowledge.

The needs of rural women, according to [5] show that more than 70 percent of the poor and the majority of the world's 880 million illiterate youths and adults live in rural areas. In addition, rural communities do not provide access to formal education, health services, transportation, technology and markets. The quality of education which is available is poor. The researcher also said that recent data shows that among the 1.3 billion people below the poverty line, 900 million women are affected, and of these, 500 million of them live in rural areas. Rural education levels are lower than urban areas in almost every country.

This phenomenon may be seen in Malaysia as well. The adult literacy rate trend shows a continuous increase from 84.9 per cent in 1989 to 92.8 percent in 2008. The adult literacy rate in urban areas is higher at 95 per cent compared to 90 per cent of the rural areas in 2008. The adult illiteracy rate has dropped from 10.6 percent in 2000 to 7.9 per cent in 2008 (Department of Statistics Malaysia, 2009). The role of women in family, society,

economy and politics is boosted by the existence of the National Policy on Women (NPW), which was enacted in parliament in 1989. Main objectives of the policy are: i) to ensure fairness between men and women concerning the control and use of resources and information and to obtain fair benefits from development opportunities and ii) integration of women in all sectors of national development, in accordance with their abilities and needs, to enhance the quality of life and eradicate poverty, ignorance and illiteracy and to ensure peace and prosperity. The New Economic Policy (NEP) was introduced in 1970 with a 20-year implementation period with a two-pronged objective of eradicating poverty and overcoming the gap between the races. The main strategy is to eliminate poverty through increased education levels. However, though efforts that have been undertaken to improve literacy and decrease poverty, problems persist, and the targeted goals are long over.

[6] describes the factors that influence the educational backwardness of rural areas: lack of awareness among parents regarding the importance of education, family poverty, lack of motivation to learn, difficulty in changing the perception of education and difficulty in providing technology to students. At the same time, he suggests six ways to strengthen rural education: provide more options educational opportunities for parents and students, establish a sustainable educational model, build up educational infrastructure, develop core skills and competencies, improve the assessment and evaluation system and increase entrepreneurial programs.

Poor rural women often have no academic qualifications and skills; this, coupled with single-mother status, causes women to face difficulty in their lives. Women caught in this situation often look for short-cuts which will lead them out of this quagmire, which in turn affects the lives of their family, especially their children. Involving rural women in entrepreneurship is a major initiative to generate income and perhaps the next-best strategy to get out of poverty [7]. Furthermore, [8] also stated that the driving factors for single parents in getting involved in entrepreneurship include pressures of life and survival, environmental factors such as culture, government support, lifestyle changes and available resources. These factors also include economic and demographic issues such as gender, age, background, educational background and experience. However, women entrepreneurs who need knowledge and skills also have difficulty accessing education, financial services, and transportation. This social problem may trigger a never-ending spiral of failure.

5. DISCUSSION

This descriptive study was envisioned to investigate the current condition of rural women particularly in the 4th District of Laguna, and the result of this study may be basis for program or programs that may alleviate the economic condition and dignity of these women as members of the society. Specifically, this sought to observe the Clientele's profile with regards to Civil status, number of Siblings, Monthly Income, Educational Background and age. Moreover, it also sought to find the Level of perspective of Rural Women in the 4th district of Laguna in terms of Human Rights, Health Care Access, Standard of Living,



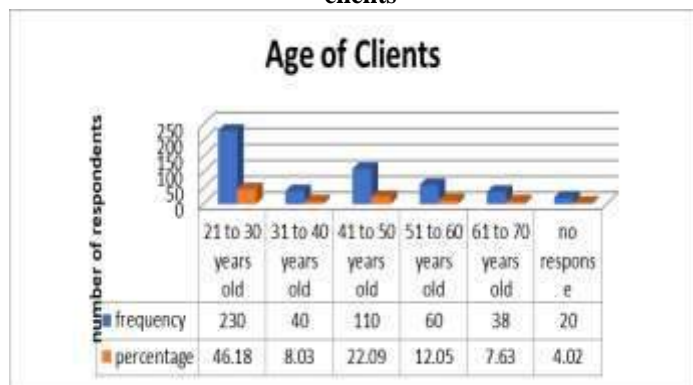
Gender Equality, Education and the Needs assessment of the Profile, the Perspectives and the needs of Rural Women with regards to Trainings, Development Programs and Activities.

Mean level was used in getting the rural women’s level of perspective in the 4th district of Laguna. Survey was done to accumulate the clientele’s profile.

Finally, to evaluate the Needs assessment of the Profile, the Perspectives and the needs of Rural Women with regards to Trainings, Development Programs and Activities, the frequency and percentage were evaluated and recorded.

The Statistical treatment of data revealed the following findings:

Figure 1.1. Clientele’s Profile with regards to the age of clients



The ages 21 to 30 years old receive the highest frequency of two hundred and thirty (230) or 46.18% of the total 498 respondents followed by the ages 41 to 50 years old, obtaining the frequency of one hundred and ten (110) or 22.09%. On the other hand, the ages 61 to 70 years old got the lowest frequency of thirty-eight (38) or 7.63% of the total 498 respondents. Which clearly provides that the 4.02% or twenty (20) respondents did not or forgot to answer the question with regards to their age.

This means that the clientele’s profile with regards to the age of 498 respondents in 16 municipalities of 4th district of Laguna, are majority in the middle age.

Figure 1.1 shows the clientele’s profile with regards to civil status in 16 municipalities of 4th district of Laguna.

Figure 1.2. Clientele’s Profile with regards to Number of Siblings



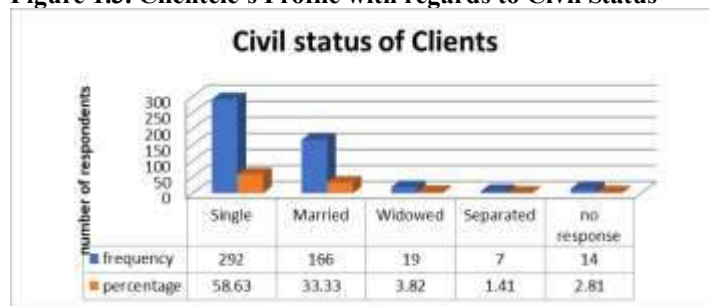
For the number of siblings, “3 to 5” receive the highest

frequency of one hundred ninety-five (195) or 39.16% of the total 498 respondents followed by the number of siblings “6 to 8” have the frequency of one hundred twenty-seven (127) or 25.50%. While the number of siblings “9 and above” got the lowest frequency of fifty-one (51) or 10.24% of the total 498 respondents. And there are twenty-four (24) or 4.82% did not answer or forgot to answer the question regarding the number of siblings they have.

This means that the clientele’s profile with regards to the number of siblings of 498 respondents in 16 municipalities of 4th district of Laguna, belong to big families.

Figure 1.2 shows the clientele’s profile with regards to monthly income in 16 municipalities of 4th district of Laguna.

Figure 1.3. Clientele’s Profile with regards to Civil Status



For the status, “Single” receive the highest frequency of two hundred ninety-two (292) or 58.63% of the total 498 respondents followed by the status “Married” have the frequency of one hundred sixty-six (166) or 33.33%. On the other hand, the status “Separated” got the lowest frequency of seven (7) or 1.41% and there are fourteen (14) or 2.81% who did not answer or forgot to answer the question regarding their civil status.

This implies that the clientele’s profile with regards to the civil status of 498 respondents in 16 municipalities of 4th district of Laguna, majority are single.

Figure 1.3 shows the clientele’s profile with regards to number of siblings in 16 municipalities of 4th district of Laguna.

Figure 1.4. Clientele’s Profile with regards to Monthly Income



For the income, “P10,001 to P15,000” receive the highest frequency of one hundred twelve (112) or 22.49% of the total 498 respondents. Followed by the income “P5,001 to P10,000” have the frequency of one hundred and six (106) or

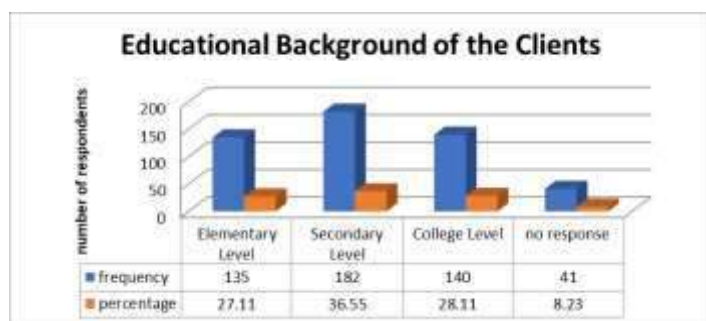


21.29% of the total 498 respondents. While the income “P20,001 and above” got the lowest frequency of seventy (70) or 14.06% of the total 498 respondents. And there are fifty-two (52) or 10.44% did not answer or forgot to answer the question regarding their monthly income.

This means that the clientele’s profile with regards to the monthly income of 498 respondents in 16 municipalities of 4th district of Laguna, are very low or not enough to support their families.

Figure 1.4 shows the clientele’s profile with regards to educational background in 16 municipalities of 4th district of Laguna

Figure 1.5. Clientele’s profile with regards to Educational Background



For the education, “Secondary Level” receive the highest frequency of one hundred eighty-two (182) or 36.55% of the total 498 respondents. Followed by the education “College Level” have the frequency of one hundred and forty (140) or 28.11 % of the total 498 respondents. While the education “Elementary Level” got the lowest frequency of one hundred thirty-five (135) or 27.11% of the total 498 respondents. And there are forty-one (41) or 8.23% did not answer or forgot to answer the question regarding their educational background.

This means that the clientele’s profile with regards to the educational background of 498 respondents in 16 municipalities of 4th district of Laguna, majority of them are not capable to apply a good job due to lack of educational qualifications.

Table 1. Level of Perspective of Rural Women in the 4th District of Laguna

Level of Perspective of Rural Women in the 4th district of Laguna in terms of...	Overall Mean	Standard Deviation	Verbal Interpretation
1. Human Rights	4.54	0.612	To a high extent
2. Health Care Access	4.38	0.768	To a high extent
3. Standard of Living	4.43	0.642	To a high extent
4. Gender Equity	4.39	0.590	To a high extent
5. Education	4.43	0.690	To a high extent

Based on the data gathered, the overall mean of 4.54, standard deviation of 0.612, indicated the level of perspective of Rural Women in the 4th district of Laguna in terms of Human Rights are verbally interpreted as high extent. This means that the contents of the programs are very necessary to the perspectives of the rural woman of each municipality.

According to [9], human rights are norms that protects people everywhere from certain aspects such as political, legal, and even social abuses. It is usually mandatory and every single person is entitled to human rights.

With regards to the Client’s Health Care Access, the overall mean of 4.38 and standard deviation of 0.768, indicated the level of perspective of Rural Women in the 4th district of Laguna in terms of Health Care Access are verbally interpreted as high extent. This means that the contents of the programs are very necessary to the perspectives of the rural woman of each municipality.

According to Agency for Healthcare Research and Quality, Health care access is a person’s privelage of having personal health care services to better achieve the best health outcomes.

Furthermore, the level of perspective of rural women in the 4th district of Laguna in terms of Standard of Living indicated that it is verbally interpreted as High Extent with an overall mean of 4.43 and standard deviation of 0.642.

The overall mean of 4.39, standard deviation of 0.590, indicated the level of perspective of Rural Women in the 4th district of Laguna in terms of Gender Equality are verbally interpreted as high extent. This means that the contents of the programs are very necessary to the perspectives of the rural woman of each municipality.

According to IncludeGender, gender equality is a political concept that gives emphasis to implementaion of equality between genders. It is believed that, if gender equality is evident, women and men get to enjoy the same opportunites, rights, and responsibilities within all areas of life.

The overall mean of 4.43, standard deviation of 0.690, indicated the level of perspective of Rural Women in the 4th district of Laguna in terms of Education are verbally interpreted as high extent. This means that the contents of the programs are very necessary to the perspectives of the rural woman of each municipality.

According to [10], education is the wise, hopeful, and respectful cultivation of learning having the mindset that everyone should have a chance in life. It is inviting the truth and possibility of pursuing and investing time in discovery.

Table 2. Needs assessment of the Profile, the Perspectives and the needs of Rural Women in the 4th District of Laguna with regards to Trainings, Development Programs and Activities

Trainings, Development Programs and Activities	frequency	percentage
1. Good housekeeping (The 5S of good housekeeping: 1 Sort (SEIRI), 2 Systematized (SEITON), 3 Sweep (SEISO), Sanitize (SEIKETSU), and	39	7.83



5 Self-discipline (SHITSUKE); House Cleaning Tips and Maintenance		
2. Proper Waste Management (How to manage home waste; proper garbage disposal; segregation etc)	42	8.43
3. Disaster Preparedness and Emergency Management (Planning for Special Needs, Safety skills, Useful Emergency Planning)	45	9.04
4. Women Empowerment: Basic Life Skills, First Aid Treatment in Emergency Cases, Awareness on Basic Human Rights)	48	9.64
5. Basic House Electrical Wiring	42	8.43
6. Financial Management and Self reliance	57	11.45
7. Basic Communication & Literacy Skills	74	14.86
8. Coping Mechanisms & Stress Management	46	9.24
9. Sustainable Livelihood Development Program; Baking, Basic Sewing, Cosmetology	62	12.45
10. Personal Grooming, Wellness & Fitness	43	8.63
TOTAL	498	100.00

The Basic Communication & Literacy Skills received the highest response of seventy-four (74) or 14.86% of the total respondents. Followed by the Sustainable Livelihood Development Program; Baking, Basic Sewing, Cosmetology with sixty-two (62) or 12.45% of the total respondents. While the Good housekeeping (The 5S of good housekeeping: 1 Sort (SEIRI), 2 Systematized (SEITON), 3 Sweep (SEISO), Sanitize (SEIKETSU), and 5 Self-discipline (SHITSUKE); House Cleaning Tips and Maintenance got the lowest frequency of thirty-nine (39) or 7.83 of the total respondents.

The data indicated the needs assessment of the Profile, the Perspectives and the needs of Rural Women in the 4th district of Laguna with regards to Trainings, Development Programs and Activities are more on basic communication and literacy skills.

6. RECOMMENDATION

The present study investigated the needs assessment of rural women. Through the conclusions drawn from findings, the following recommendations were made:

1. With the help of the researchers, the government must pursue the implementation of livelihood programs for rural women. This would be a great help for them, to become more knowledgeable about the resources existing in their surroundings and how they can maximize the great potentials of the resources and knowledge they have acquired throughout the process.
2. The phase 2 of the project: providing extension programs to the community to extend and develop

personal and community needs of rural women with 4th district of Laguna such as personal care, housekeeping, literacy, financial management and literacy, special skills and waste management should be implemented. This would be a great opportunity for women who was not able to finish studies, does not have the money to do so or being busy enough to focus more on their families. By implementing the phase 2, rural women would be equipped to improve a certain skill that they personally admire, and make money without having to leave the community and their family.

3. During those periods, LGU's and NGO's could be partners to be able to educate and empower rural women of things they can actually do. The programs implemented must not prioritize educational backgrounds, only those of the skills they have acquired and developed during various seminars implemented by the researchers.

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PERFORMANCE OF CBMA FACULTY AS PERCEIVED BY SUPERVISORS, STUDENTS, AND SELF

Dr. Allan A. Lalosa¹, Dr. Alirose A. Lalosa², Mr. Baltazar A. Abobo, Jr³

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ABSTRACT

This study investigates the performance of College of Business Management and Accountancy (CBMA) Faculty of Eastern Samar State University (ESSU). Specifically, this examines the performance of faculty in the area of instruction as perceived by the supervisors, faculty themselves, and some randomly selected students. Descriptive and comparative method were used to achieve the goal of this study. It was found out that that performance of the faculty is exceptional. However the respondents' rating varies significantly thereby concluding that perception of raters is a factor. Grounded on the result that students rating and supervisors rating are lower than the faculty self-rating, it was recommended through the CBMA Dean to inform the faculty in any best means to exert more effort to eliminate the gap in their perceptions.

KEYWORDS: faculty, performance, rating, students, supervisor

I. INTRODUCTION

Background of the Study

Higher education is highly important. Generally, it is recognized as an instrument for growth and development of society as affirmed by studies conducted. It also provide lots of benefits to individuals like higher income earnings, varied job opportunities, higher intelligence, successful lives and many more. Thus, it is just necessary that performance of higher education faculty members be tested and improved to meet the expectations of its clients.

Performance appraisal of university's faculty members offers a lot of benefits to both the faculty and the university. Faculty members will be able to know their strengths and weaknesses, will have better communication, and will boost their feeling of commitment to the institution. On the other hand, the university will benefit by having motivated staff, better understanding of faculty members' abilities and potentials, gain insights in improving performance, and achieve a learning organization within a collaborative atmosphere. (Karkoulian 2002)

The importance of higher education in the Philippines can be gleaned from the Commission on Higher Education (CHED) mandate which is to promote quality education to reduce poverty and build national competitiveness. Colleges and Universities are the ones who allocates human

resources needed by different institutions to advance economic development (NIU Outreach 2005).

The College of Business Management and Accountancy of Eastern Samar State University is one of the many that faces the challenge imposed on higher education by its stakeholders. The expectation is high especially today that it was given ISO certification by international accrediting bodies. It must deliver quality education that meets the knowledge and skills needed by the students, provide the demand of the industry, and at par with international universities.

The weight of this challenge can be viewed as on the side of the faculty. Much is expected from them in infusing higher education knowledge and skills to students since they are the ones who has direct contact with them.

Hence, it is in this realization that a study be conducted to find out the performance of CBMA faculty members through the analysis of the different perceptions of the supervisors, students and their self.

Objectives

1. To identify the distribution of raters of faculty performance
2. To determine the performance of CBMA faculty as perceived by the supervisors, students, and self
3. To identify if there is a significant difference in the perception of raters on the performance of CBMA faculty



Significance of the Study

This study would be valuable and of great significance to the following, to wit:

The Stakeholders. This study will give an insight whether the faculty members are performing according to their sworn duty.

The University. The findings of this study will give an insight on what the faculty members are doing. This will also give an idea on what possible intervention to launch in order to improve further the performance of the faculty.

The Supervisors. The results of this study will provide an understanding on what possible strategies to undertake on areas needing improvement.

The faculty members. The outcome of this study will serve as a mirror of their true performance in their duty. It will awaken their minds and will boost their commitment to the university and the students.

The students. This study will give them the idea if their instructors are giving acceptable performance. It will boost their trust and cooperation.

The Future Researchers. This study would serve as a basis in doing same kind of research undertaken in a wider scope and coverage.

Scope and Delimitation of the Study

This study is conducted to analyses comparatively the performance rating of CBMA faculty members given by the supervisors, the faculty themselves, and some randomly selected students.

Definition of Terms

The following terms and concepts were defined either conceptually or operationally to understanding this study.

CBMA Faculty. Operationally, it refers to the core faculty members of College of Business Management and Accountancy.

Performance. Conceptually, it refers to action or process of carrying out or accomplishing an action, task or function. Operationally, this refers to the execution of the task/duty given by the university.

Self. Operationally, this refers to the CBMA faculty members.

Students. Operationally, this refers to all enrolled students of the College of Business Management and Accountancy.

Supervisors. Operationally, it refers to the Dean and the Program Heads of the different departments of the College of Business Management and Accountancy.

II. REVIEW OF RELATED LITERATURE AND STUDIES

Several studies conducted disclose factors which influences the performance of faculty. According to Sinnappan (2017) working environment has a significant positive impact on the performance

of an employee. Teamwork, leadership and structure, team trust, and rewards likewise influences performance of faculty members (Sanyal and Hisam 2018). In the study of Ahmed et. al. (2016), it was found out that compensation and career growth have a significant effect on business faculty performance. Moreover, it was determined that compensation has a positive impact on motivation, which directly enhances performance of employees.

In the study of Amjad (2013), it was concluded that the performance of faculty members by the students, peer, and by themselves, does not significantly differ. However, it must be the students who can best give the accurate performance rating since they are the ones who has the longer time contact with their professors. In the study of Arabaci and Ersozlu (2010) for example, it was affirmed that students' perceptions of their supervisors' mentoring skills are positive.

In the study of Lagnador et. al. (2015), students' rating was high on the performance of the tourism and hospitality faculty members of the Lyceum of the Philippines University-Batangas. This was true to six evaluation criteria with communication skills obtained the highest and classroom management expertise as well as relational skills obtained the least performance rating.

The question if faculty might compromise good pedagogical practices for positive students evaluation teaching was answered by the study of Hartford (2017) entitled "The Effect of Student Evaluations on Faculty Performance". His findings tell that respondents did not change their behaviors or pedagogy in order to receive positive student evaluations. For the faculty, student assessment was not the only method to appraise academic staff, moreover, they don't want to compromise student learning by changing their teaching behavior.

Theoretical Framework

This study was based from the goal-setting theory of Edwin Locke. It states that goal setting is essentially link to task performance. It can be a powerful tool when used properly which can improve performance and productivity (Hardin 2013). Assumed in this theory that CBMA faculty members are in one with the goals of the university, hence, it is expected that they are showing satisfactory performance.

III. METHODOLOGY

Research Design

This study use both descriptive and comparative method to achieve the research objective.

Locale of the Study

This study was conducted in the College of Business Management and Accountancy of Eastern Samar State University - Borongan Main Campus.



Respondents

The respondents of this study were the Dean and Program Heads, all faculty members, and some randomly selected students of the College of Business Management and Accountancy.

Data Gathering Procedure

This study used the first semester SY 2019 - 2020 secondary data available in the college. It utilized evaluation results answered by the three respondents, namely, supervisors, students, and faculty themselves.

Weighted Mean

- 1.00 - 1.80
- 1.81 - 2.60
- 2.61 - 3.40
- 3.41 - 4.20
- 4.21 - 5.00

Statistical Treatment of Data

The data was analyzed using statistical tools like frequency count and percentage to present the distribution of respondents, and ANOVA along with Scheffe's test to find out if there is a difference in the response of the respondents.

Weighted mean was used to determine the performance of the faculty. It made use of the Bloom's 5-point approach to performance reviews and Hedonic Scale in interpreting the result:

Interpretation

- Poor Performance
- Needs Improvement
- Meets Expectation
- Above Average Performance
- Exceptional Performance

V. RESULTS AND DISCUSSION

This chapter presents the performance of CBMA Faculty as perceived by the Supervisors, Students and Self.

Distribution of Raters of Faculty Performance

Table 1 shows the distribution of raters of faculty performance. Students comprises majority of the raters consisting of 627 or 94.4%. Supervisors are 6 or .9%, while the total number of faculty who rated for their self are 31 or 7%.

Table 1- Distribution of raters of faculty performance

Raters	Frequency N=664	Percent
Supervisors	6	.9
Students	627	94.4
Self	31	4.7

Performance of CBMA Faculty as Perceived by the Supervisors, Students, and Self

Table 2 presents the performance of CBMA faculty as perceived by the supervisors, students, and self. Based from the table, it shows that all of the raters rated the performance of the faculty as exceptional with a mean rating of 4.59 by the self, 4.53 by the students, and 4.47 by the supervisors. Self-rating is the highest, seconded by the students,

and followed by the supervisors. It can be inferred that faculty members are confident in doing their job.

This positive result could be related to working environment as supported in the study of Sinnapan (2017) or could be related to teamwork, leadership and structure, and team trust as supported by Sanyal and Hisam (2018). However, with regards to precision power of the result, it is the students who can give the accurate rating as supported by Amjad (2013) and Arabaci and Ersozlu (2010).

Table 2. Performance of CBMA Faculty as perceived by the Supervisors, Students, and Self

Raters	Mean	Interpretation
Supervisors	4.47	Exceptional Performance
Students	4.53	Exceptional Performance
Self	4.59	Exceptional Performance
Overall Performance of CBMA Faculty	4.53	Exceptional Performance

Test of Difference in the Perception of Raters of the CBMA Faculty Performance

Table 3.1 reveals the difference in the perception of supervisors, students and self. Using

the analysis of variance, it was found out that there is a significant difference of perceptions among raters of CBMA faculty performance ($p < .05$). This indicates inconsistency in the perception of the raters.



It can be implied that students and supervisors want more from the faculty.

This finding contradicts to the study of Amjad (2013) that performance of faculty as rated by

students, peer, and themselves does not significantly differs.

Table 3.1– Test of difference in the perception of raters of the CBMA faculty performance

Statistical tool	P value	Interpretation
Analysis of Variance	.000	Significant

Table 3.2 indicates the result when the difference of the means of raters’ perceptions were comparatively tested using Scheffe’s test. The outcome tells us that student perception on the performance of CBMA faculty is significant different with the perceptions of supervisor and self (p<.05). The same is true when

the perception of supervisor was compared to the perceptions of student and self (p<.05). Likewise, with the perception of self compared to the perceptions of student and supervisor (p<.05). This only means raters perceptions significantly differs.

Table 3.2– Multiple comparison of raters’ perceptions using Scheffe’s Test

(I) Raters	(J) Raters	P value	Interpretation
Students	Supervisors	.000	Significant
	Self	.000	Significant
Supervisors	Students	.000	Significant
	Self	.000	Significant
Self	Students	.000	Significant
	Supervisors	.000	Significant

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
SUMMARY

This study was conducted to determine the performance of CBMA Faculty as perceived by the supervisors, students, and self, in which most of the respondents were students.

It was found out that faculty performance is exceptional as perceived by all respondents. However, the quantitative measure of their ratings varies significantly. Self-rating was the highest, followed by the supervisors, and least by the students.

CONCLUSION

Based from the findings, it was concluded that the performance of CBMA Faculty is

exceptional. Nevertheless, perception of raters can influence the outcome of the performance.

RECOMMENDATION

Grounded on the findings and conclusion of this study, it is suggested through the CBMA Dean to inform the faculty in any best means to exert more effort for students and supervisors in order to eliminate the significant gap in their perceptions. There is a need to enhance teaching strategies through development of instructional materials such as modules, work books, audio visual presentations and exposure to real life situations like educational tour, field trip, seminars and conferences. Moreover, faculty members need to engage in research in order to address or develop the aforementioned teaching strategies.

VI. PROPOSED UTILIZATION/DISSEMINATION ACTIVITIES EMANATING FROM RESULTS OF THE STUDY

Objective	Strategies	Responsible Persons	Potential adopters/ beneficiaries	Expected output	Proof of utilization	Monitoring
To recommend to top management to support faculty members through allocation of	Forward the result of the study to top management for further recommendations/ suggestions of providing the faculty the necessary support	Top Management College Dean	Faculty Members	Formulated policies	Implementation of policies concerning enhancement of instruction	Communicate with top management, dean and faculty members if policies were formulated to ensure that all



funds in attending seminars/ conferences, development of IM's, conduct of research, benchmarking or educational tour for the enhancement of faculty performance	to continuously improve their performance					partners involved are working towards the realization of the policies through implementation
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FROM THE HISTORY OF MODERNIZATION AGRICULTURE FIELD IN THE REPUBLIC OF UZBEKISTAN

Oydinoy Khairullo kizi Kholdarova

Researcher of the Department of Theory of Civil Society of Andizhan State University

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ABSTRACT

In the article has been analyzes the current archive materials and scientific literature that the agriculture field in Uzbekistan and its modernization history process of agricultural sector.

KEYWORDS: *Agriculture, Uzbekistan, agriculture, economy, reforms, modernization, Action strategy.*

INTRODUCTION

After the independence of Uzbekistan, special attention was paid to the objective and scientific study of the history of irrigation. In particular, the priorities of the Action Strategy for the modernization and accelerated development of agriculture in the five priority areas of development of the Republic of Uzbekistan in 2017-2021 include “improving the reclamation of irrigated lands, development of reclamation and irrigation networks, intensive methods of agricultural production introduction of modern water and resource-saving agro-technologies, use of high-yielding agricultural machinery” [1]. For this reason, the study of the history of irrigation and development has been considered important in all periods.

RESEARCH METHODS

In accordance with the Action Strategy for the five priority areas of development of the Republic of Uzbekistan, in 2017 alone, 8.1 thousand hectares of potatoes, 27.2 thousand hectares of vegetables 9,000 ha of intensive orchards, 2,900 ha of vineyards, 10,900 ha of fodder crops and 4,000 ha of oilseeds were planted [2]. As a result of these measures, the damage caused by the cultivation of cotton and grain in low-yielding areas will be reduced by 80 billion soums reduction by UZS, additional 1 mln. As a result of the production of about 20.5 thousand new jobs in the regions, it was possible to increase the number of people employed in these areas to 75.6 thousand, to double the volume of fruit and vegetable exports. At present, the development of intensive horticulture and viticulture through the planting of

high-yielding, early-ripening and sweet-tasting dwarf and semi-dwarf trees on the basis of modern agricultural technologies, as well as increasing the production of consumer and exportable fruits and vegetables in world markets are among the key tasks.

RESULTS AND DISCUSSIONS

It is important to note that during 2011-2016, 31308 high-yielding stunted and semi-stunted intensive orchards were established in horticulture on the basis of new agro-technologies [3]. Seed-selection and variety selection play an important role in increasing the productivity of agricultural crops. Extensive research has been conducted on its introduction into production. As a result, for the first time in Central Asia, the selection of seed, legume, berry, walnut crops was launched, laying the foundation for the creation of new varieties. Thanks to many years of scientific research, about 180 fruit and grape varieties have been created, and about eighty of them have been included in the State Register.

Decree of the President of the Republic of Uzbekistan dated March 5, 2016 “On measures to further develop the raw material base of fruits, vegetables and meat and dairy products in 2016-2020, deepen their processing, increase food production and exports” [4]. According to the resolution, a total of 180 investment projects worth \$ 595,886.3 thousand will be implemented for the construction of new enterprises for deep processing of agricultural products, reconstruction and modernization of existing ones. According to this decision, in 2016-2020, 138 fruit and vegetable



processing plants with a capacity of 99,100 tons, 46 meat processing plants with a capacity of 16,500 tons, 79 dairy processing plants with a capacity of 34,850 tons and other food products will be produced. It is planned to launch 153 new processing plants with a capacity of 26,840 tons [5]. As a result of the implementation of systemic measures for deep processing of agricultural products by 2020, compared to 2016, the volume of canned fruits and vegetables increased by 79.4%, fruit juices by 80.5%, dried fruits by 73.1%, meat and meat products by 59.5%, sausage products 68.8%, milk and dairy products 56.6%, butter 51.4%, confectionery 59.9%, vegetable oil 57.2%, sugar 24.0, cheese 2.5, canned meat 2, 4, increased fish production by 3.4 times and frozen fish by 2.8 times [6].

In the Action Strategy, the total cost of international financial institutions for agricultural development in 2017 is 337.8 million. It is planned to use the funds in the following areas:

- 150 million dollars from the Asian Development Bank for the project "Modernization of agricultural production";

- 150 million from the International Bank for Reconstruction and Development. dollars for the project "Development of the livestock sector";

- 23.8 million from the International Fund for Agricultural Development. The project "Expansion of dairy production and development of processing in Kashkadarya and Jizzakh regions" was directed to the project.

In 2017, for the first time, about 1 million tons of grain were released. hectares of land were planted with vegetables, potatoes, melons and legumes, and 5.5 mln. more than a ton of products were produced. In the same year, instead of cotton and grain on 96,000 hectares of low-yielding areas, cabbage, various vegetables and greens were planted on 32,000 hectares, and thousands of tons of products from these areas were exported. Intensive orchards and new vineyards were planted on 11,000 hectares, and greenhouses on 1,500,000 hectares. This year, the republic produced 8,377,000 tons of grain, more than 2,900,000 tons of cotton, 12,450 tons of cocoons, 500,800 tons of rice, 22 million tons. tons of fruits and vegetables and 12.3 mln. tons of meat and milk were grown.

According to the Resolution of the President of the Republic of Uzbekistan dated October 10, 2017 "On organizational measures for further development of farmers, dehqan farms and landowners", support in the field of storage and sale, including the implementation of agro-technical measures and the conclusion of contracts, the export of products to foreign markets.

The measures outlined in the "Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021" for the

accelerated development and modernization of agriculture will serve to develop the agricultural sector at a sustainable pace, strengthen food security and increase export potential. In accordance with the Decree of the President of the Republic of Uzbekistan dated March 29, 2018 on the "Rural Development" program, in 2018, construction and beautification works were carried out in 386 villages in 159 districts. In these villages there are 142,000 detached houses and more than a thousand multi-storey houses, 3,000 km. road repair, 2.5 thousand km. electricity, 2 thousand km. construction and rehabilitation of drinking water networks, construction of 2,400 markets and other infrastructure facilities [8].

On April 17, 2018, the President of the Republic of Uzbekistan issued a resolution "On measures to organize the activities of the Ministry of Agriculture of the Republic of Uzbekistan", according to which the Ministry of Agriculture of the Republic Consistent implementation of the tasks of ensuring the coordinated implementation of the priorities of state policy in the field of agriculture. At the same time, according to this decision, the Minister of Agriculture of the Republic of Uzbekistan is instructed to:

- Ensuring timely and quality implementation of the requirements of the laws of the Republic of Uzbekistan, resolutions of the President and the Cabinet of Ministers of the Republic of Uzbekistan, normative legal acts;

- Effective implementation of programs, action plans, "road maps" and other policy documents on agricultural development, socio-economic development of the regions and the solution of problematic issues in the field of agriculture.

On April 26, 2018, a video conference chaired by the President of the Republic of Uzbekistan Sh.M.Mirziyoev was held on issues related to the effective organization of the "Prosperous Village" program and the most important tasks in this regard. "Over the past 25 years, no practical work has been done to improve the appearance and beautification of villages, except for the construction of exemplary housing, for which no funds have been allocated," the head of state said. In many villages, important areas such as streets, social facilities, drinking water, and electricity supply have been neglected and neglected for years." [9]

According to the Presidential Decree of June 27, 2018, the program "Obod mahalla" was adopted. According to him, in 2018, at least 2 neighborhoods in each city and at least 3 neighborhoods per year until 2022 will be radically renovated, construction and repair of drinking water, electricity and natural gas, sewerage networks, groundwater level reduction, as well as 5,607 km. internal roads, repair of 369



social facilities, construction of 969 market infrastructure facilities and service outlets [10]. For this purpose, “Obod mahalla” funds have been established under local khokimiyats.

In his address to the Oliy Majlis on December 28, 2018, the President of the Republic of Uzbekistan Sh.M.Mirziyoev emphasized the reforms in the economy of the republic, in particular, in the field of agriculture, which is an integral part of it. In particular, the reform of the management system of the agricultural sector, the introduction of advanced technologies for the rational use of land and water resources, ensuring food security were recognized as the most important tasks.

The following year, it was decided to establish 48 cotton-textile clusters to increase cluster cotton production to at least 51%. At the same time, given the need to comprehensively develop the activities of grain and fruit and vegetable clusters and the fact that this sector is relatively new to the country, it was necessary to review the procedures for state support, simplification of the credit system, cost subsidies, land allocation.

CONCLUSION

In short, through the deepening of structural changes in the agro-industrial sector of the country, the rapid development of production and further strengthening of food security and production of environmentally friendly products through the uninterrupted supply of food and raw materials to the processing industry. At the same time, as a result of the care provided to farms by the government of the republic, their rational use of land, water, machinery and other material and financial resources, productivity has increased from year to year. These farms have achieved high results in the cotton and grain sectors, primarily due to the increase in their material interests as a result of their labor.

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COVID-19 AND THE ROLE OF DIGITALISATION IN THE INDIAN ECONOMY (IN THE PRESENT CONTEXT)

Dr. Manjunatha S¹. M.L.I.Sc, M.Phil., Ph.D, Mr. Arun Kumar L S²,

Dr. Vivek I Sarikar³, Basavarajaiah M. S⁴

¹Librarian, GFGC- HOSKOTE

²MA (Economics) KSET, MA (Political Science) KSET
Assistant Professor of Economics. Ramaiah College of Law, Bengaluru

³Assistant Professor of Commerce & Management, GFGC- KR Puram, Bengaluru

⁴MA (Economics), M-PHIL, MBA, Assistant Professor of Economics, Ramaiah College of Law, Bengaluru

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ABSTRACT

Digitalisation involves online transaction, as digitalisation of the economy is the usage of electronic mode of transaction for receipts and payments of the country, as most of the developed economies in the world like USA, Japan were using more online transactions some decades back, as it provides benefits for the consumers, producers by saving time, availability in lower cost and reduces the cost of transportation to purchase any products in the country, like education, banking insurance hotel services, and commerce sectors. India is one of the fastest growing developing economy in the world after China, with an average GDP (Gross Domestic Product) of around 7 percent from 2015-2019, India's internet economy is expected to double from US\$ 125 billion as of April 2017 to 250 billion by 2020. India's E-commerce revenue is expected to jump from US\$ 39 billion to US\$ 120 billion in 2020, growing an annual rate at 51 percent, due to Covid-19 most of the states in India were in Lock down situation after March 2020, there is a need for all the sectors in the economy for Digital inclusion to achieve the goal of the country that is "Digital India". India can try to improve to make payments and receipts in unorganised sectors through online digital mode, like digital card payments like ATM (Automated Teller Machine), Rupay, Visa, Maestro, online shopping by promoting central governments schemes like "Make in India", export promotion trade schemes. India can use this global pandemic situation by making flexible investment destination in the globe, As most of the global giants are spacing away from China to make investment or to open start ups in China, the purpose of this study is to Make India self-reliant by implementing various schemes, E-commerce promotion during covid-19 epidemic situation

KEY WORDS: Digital technology, Covid-19, Indian Economy, E-Commerce and online education.

I. INTRODUCTION

India's E-Commerce is gaining its significance during covid-19, as most of the consumers are not interested in offline shopping, because shops, malls, theatres and educational institutions are closed during lockdown period, Covid-19 has caused an inflexion in e-commerce penetration in the globally driven by the consumers need for consumer, convenience and safety, even in

India online is gaining salience, due to consumers unwillingness to step out to buy commodities in shops, malls and restaurants, teaching in Indian institutes are conducted in online mode from March 2020, especially the private institutes and universities are importing digital technological tools and applications, like "Google meet, Zoom cloud meetings, Lark" etc, are used more than before in the country. India has a greater challenge during and



post Covid-19 situation, first one is to invest and to implement Digital technology in both public and private sectors like education, e-commerce, as it was very essential during covid-19 situation, second one is to improvement in the growth of the nation by increase in GDP (Gross Domestic Product) by technical inclusion in the Indian economy, third one is to promotion of e-commerce in the Indian economy in primary, secondary and tertiary sectors through digital inclusion in making nation into-self reliant India during and post covid-19 situation.

II. REVIEW OF LITERATURE

NICHE BUSINESS

A Study conducted Deloitte; "Future of E-commerce Uncovering innovation" notes the raising culture of start-ups focusing on niche areas that tend to serve everyday purposes of the customers

WHO:

"A pandemic is a worldwide spread of new disease. An influenza pandemic occurs when a new influenza virus emerges and spread around the world and most of the people do not have immunity".

WTO

The term "electronic commerce" is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means.

III. NEED OF THE STUDY

1. Ecommerce is a positive factor for sustainable development of the Indian Economy, with greater accountability and convenience during covid-19 lockdown situation.
2. The emergence of Covid-19 is posing challenge to the Indian Economy to resume economic activities internally and externally
3. To understand government fiscal policies, packages to overcome the problem of health crises, with suitable fiscal policies to achieving India's goal "Self Reliant India or Atmanirbhar Bharat".
4. India has to implement properly government schemes like digital India and Make in India, because India still use most of the foreign developed technology in some sensitive fields.

IV STATEMENT OF PROBLEM

covid-19 has brought uncertainty in resuming supply and demand in economic activities in India, most of the developed economies use online transaction or e-transactions in all economic and business activities, But India is slowly gaining the importance of e-commerce, from March 24, 2020 lockdown, the government of India has to offer more sops and opportunities for the manufacturers to produce, innovate globally efficient products of global standard, to increase the demand for self reliant India scheme through usage of e-commerce and technology.

V OBJECTIVES OF THE STUDY

1. To understand the economic, social impact caused by Covid-19 epidemic in India.
2. To understand the importance of e-commerce and government economic policies to promote India into self reliant economy.
3. To enables sustainable growth of e-commerce, production and promotion of domestic goods internally and externally during covid-19 and post covid-19 by Indian Economy.
4. Indian Economy can Make use of Covid-19 situation, by using the present pandemic, where most of the developed Economies, MNC's (Multi National companies) are moving away from China, or they are not interested in investing in China. India can try to invest in technology for the promotion of e-commerce.
5. India can try to be a digital economy, by trying to implement e-transaction of exports and imports in this lockdown situation and can try to increase the flexibility in countries growth in various sectors, where India is finding hard to development in education, trade during pandemic situation.

VI RESEARCH METHODOLOGY

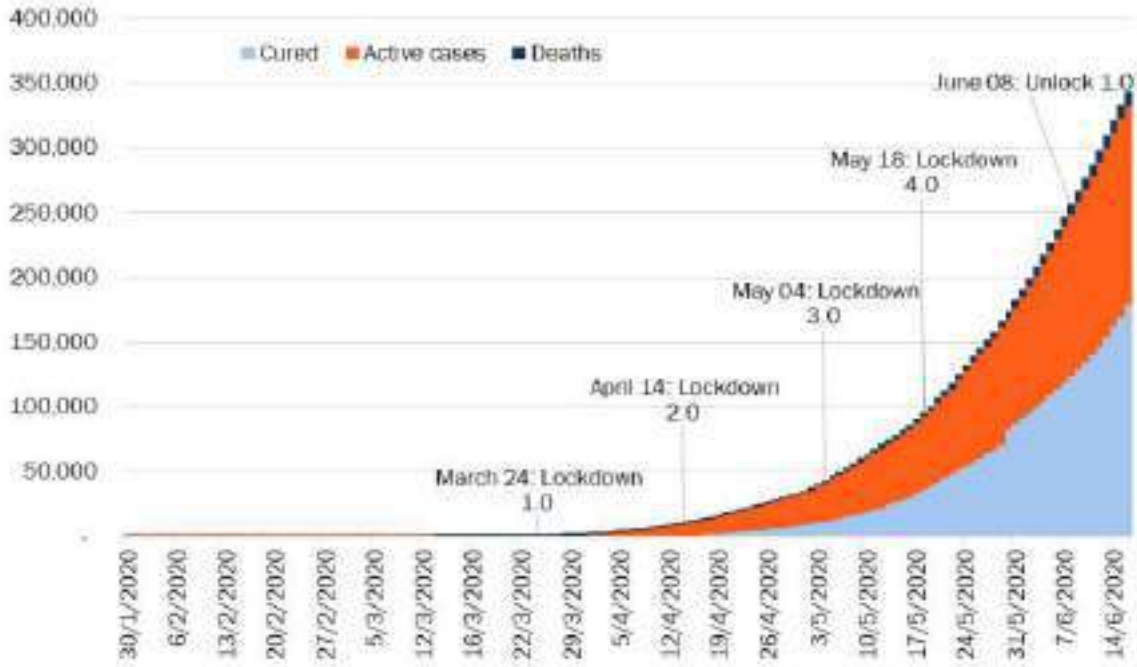
This research output is the outcome of an overview conducted on covid-19 and its impact in India, opportunities to promote digitalisation in e-commerce and making India self reliant Economy in the Indian context experimental approach, during pandemic situation. It uses secondary data for analysis, discussion with expert part of research work.



VII RESULT AND DISCUSSION

1. COVID-19 CUMULATIVE CASES IN INDIA IN 2020.

Figure 1. Total (cumulative) number of cases of COVID-19 in India



Source: Ministry of Health and Family Welfare, Government of India.

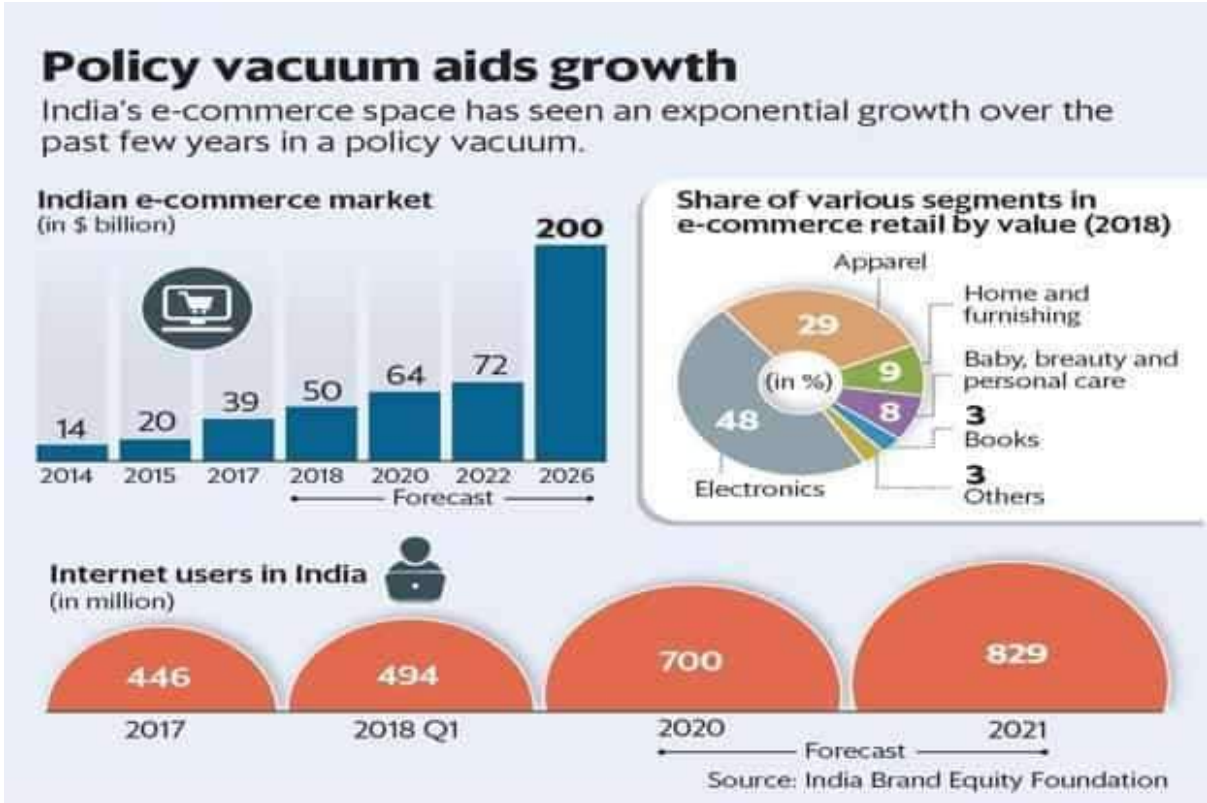
BROOKINGS

The graph indicates the rise in total number of covid-19 cases, which made Indian economy to implement national lockdown in most of the parts of India, during the lockdown phase 1 and 2, the Economic activities in India was almost standstill, this resulted in decrease in demand for petroleum products, oil,

sales and business activities, but after lockdown 3 and 4 there was some concision given to some development and economic activities, unlock phase after June 8 resulted in resuming Economic activities but drastic increase in covid-19 cases in India.



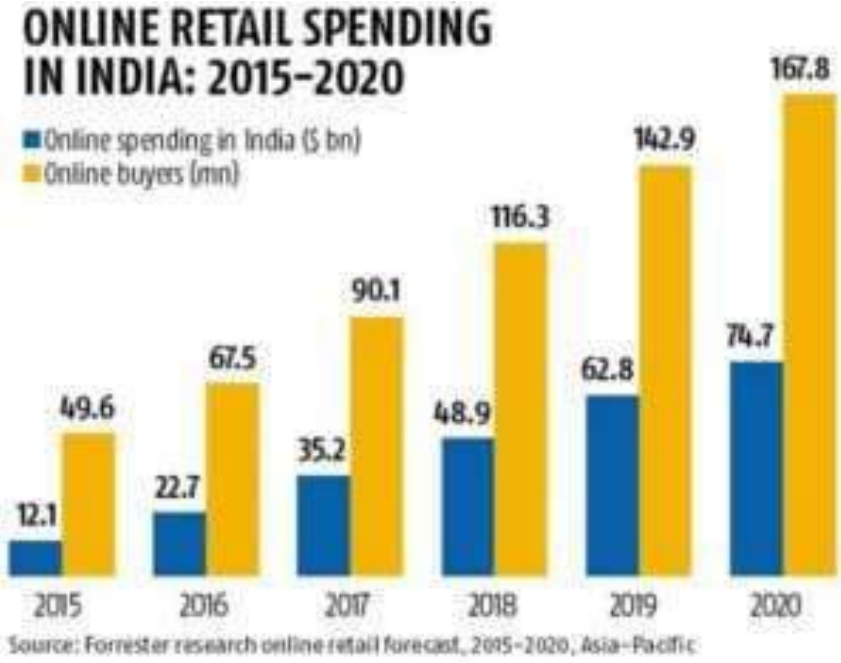
2. E-COMMERCE RETAIL SHARE IN INDIA



The graph indicates the future of the Indian E-commerce in a development stage, where India may reach \$200 billion in E-commerce by 2026, with the increase of internet users from last one decade, India has increased its online trading, purchases during

covid-19 pandemic situation. Many forecasts have indicated that India is within top 5 positions in number of internet users in the world.

3. ONLINE BUYERS AND ONLINE SPENDING IN INDIA.





The graph the increase in the number of internet users in Indian Economy, by the report of Asian pacific, in the recent trend the shopping of all consumer goods are purchased in E-transactions, which indicates the growth of E-commerce sector in India, but in 2020 the statistics indicates the greatest increase in online shopping due to the fear of Covid-19, majority of consumers are not interested in offline shopping. India has comparative advantage in growth of E-commerce due to free service and multi polarisim in trade by online MNC`S and e-commerce entrepreneurs in India which is ahead to reach self-reliant India, with growth in Indian Economy.

VIII FINDINGS

1. Covid-19 has emerged as bigger challenge for Indian Economy to retain development in various sectors, due to covid-19, where service sector is worst hit including education field; it may cause inflationary pressure in the Economy.
2. According to reports published by International Monetary Fund (IMF) and Central Statistics Office (CSO), India is among the fastest growing economies in the world. Among several factors, a conscious patronization of online commerce, and an emergence of retail as a dominant market segment have contributed to the unprecedented growth of ecommerce in India.
3. For the financial year 2016-17, ecommerce sales reached the US \$16 billion with a projection of a seven fold growth within the next two fiscals as estimated by Morgan Stanley. By 2020 online commerce sales is expected to cross \$120 billion. is one of the positive factor for India's goal Atmanirbhar Bharat
4. India can emerge as major producer of medical, pharmaceutical, technology based innovative products in primary, secondary and tertiary products in global standards, as India is 3rd largest PPP (Purchasing Power Parity) economy, and India can try to become major exporter of the above products where India has comparative advantage through technical implementation.

IX RECOMMENDATIONS

1. The three principal driving factors for this growth in ecommerce sector of India, Participation of niche companies in online trading unmatched FDI (Foreign Direct Investment), Indian economy has to increase the investment and tax concisions to face challenges like Covid-19 or post covid-19 imbalances

2. Uniform GST (Goods and Services Tax) is a positive factor to growth of E-commerce, but India has to invest largely in infrastructure, declines for online trading to reach facilities to the last person in the country, villages, and rural remote areas, like in online education, sales promotion, and commercial companies, to increase in efficiency.
3. Relief packages to promotion of MSME (Micro, Small and Medium Enterprises), which contributes around 30 percent of Indian GDP (Gross Domestic Product) and start ups to overcome the economic crisis in Indian economy, which is caused due to epidemic disease.
4. covid-19 has its impact in India, global world causing economic and business crisis, due to imbalances in demand and supply of various products. India has absolute advantage in production of Agricultural, pharmaceutical industries, small scale industries, MSMSs and some other sectors. India can turn the tide by producing and exporting these absolute advantage sectors for the global need and achieving "Make in India" aim to be successful.

X CONCLUSION

Indian Economy can be said as one of the top markets for MNC`s and for selling their consumer goods in Indian markets. Agriculture contribution was the backbone of the India`s growth after independence, till 1991 AD, after LPG (Liberalisation Privatisation and Globalisation) many sectors like service sector, manufacturing and some sectors contributed to growth of the Indian economy. But India still depend more on imports of oil, petroleum products from OPEC countries , technology from developed nations, defence equipments from USA, Russia and Israel, and elite and educated people moving abroad for increase in standard of living. That to Covid-19 emergence has made Indian economy has aim to self reliant India form of Atmanirbhar Bharat Abhiyan , which was announced by PM Modi on policy announcements in June 2020 to reduce imports, increase in Exports and increase in Employment opportunities for over 1.3 billion population, which consists more working age population.

Indian government has announced some essential schemes like Make in India, self reliant India, and Start up India in recent years to increase in production, efficiency, output in domestic industries and other sectors, but Covid-19 has made Indian government to announce 20.97 lakh crore economic stimulus package between March 26 and May 17, balancing demand and supply of oil, food grains, packages for unorganised sector workers has made



Indian economy's growth to slow down, India has to rethink in investment and need innovative fiscal, monetary measures to overcome three challenges India is facing. First one is to control or to overcome covid-19, which is health emergency. Second one is to increase in quality, quantity of output that is export value with promotion of E-commerce for achieving Digital India, Self reliant India. Third one is India to become global power in production in all the sectors that is primary, secondary and tertiary sectors to overall increase in National Income.

XI LIMITATION

1. Covid-19 has created imbalance in demand and supply in the Indian Economy in various growth sectors had contribution of many sectors has been standstill due to 40 days of the India lockdown.
2. E-commerce sector of India has to be promoted in global level, to increase the potential of India's exports, India's trade policy has to liberalised according to the need of present development during covid-19 and post pandemic period.
3. There is huge role to be played by Indian government to be self reliant, as five pillars of it has to be improved by essential fiscal policy, that is Economy, Infrastructure, system, demography and demand, but Indian infrastructure, system is not up to the mark when we compare to other developed economies.
4. Indian government preference to health emergency due to pandemic has made India's GDP growth rate prediction to below 4%, according to the report of ADB (Asian Development Bank)
5. Indian economy is projected to contract by 10.3 percent in 2020, and to bounce back to 8.8 percent, according to data projected by IMF (International Monetary Fund).

XII SCOPE

Covid-19 has made Economic crisis worldwide, affecting billions of people around the globe including India, Economists and business analysts are not sure about the end of pandemic or when the specific medicine to be available, but the scope of the research has wide areas for Indian Economy to bounce back as one of the fastest growing Economy (fastest developing country) in the world, e-commerce which is expected to increase in significant growth in the next 5 years, according to the recent reports of WTO (World Trade Organisation). The availability of 3G/4G to the users in India has increased 10 percent annually in 2018, and expected to increase in year 2020, e-commerce has led to innovations on deliver time and hassle free

functioning and digital transactions, Indian Economy with implementation of GST has led to raise in E-commerce transactions, India can be self reliant within some sort of years by flexible fiscal and monetary policies to boost the growth supporting sectors, that is service sector, e-education, e-commerce, by the use of technology in the Indian Economy.

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ISSUES OF EXISTENCE AND EPISTEMOLOGY IN YUSUF KHOS HAJIB'S WORK KUTADGU BILIG

Oybek Abdusalomov

Teacher at the Department "Theory of Civil Society" of Andizhan State University, Andizhan Region, Republic Of Uzbekistan

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ABSTRACT

In the article, the author expresses his views on the views of the medieval Turkic peoples on the existence and knowledge in the work "Kutadgu bilig" by the great philosopher-scientist Yusuf Khos Hajib. It also analyzed a large-scale encyclopedic guide, a proverb, which reflects the whole existence of habits, moral concepts, moral principles, and norms. It raises many philosophical problems peculiar to the spiritual pursuits of the great medieval thinkers.

KEY WORDS: *epistemology, consciousness, cognition, gynecology, universal of nature, peripatetic, philosophy of compromise, rationalism, realistic ideas.*

INTRODUCTION

Yusuf Khas Hajib is a great thinker who played an important role in the development of the history of philosophical thought of the medieval Turkic peoples, a mature philosopher of his time, a famous writer, an influential statesman, a patron of science and culture, a well-rounded person. His only surviving work, Kutadgu Bilig (Knowledge That Leads to Happiness), is the oldest known example of Turkish philosophical, artistic and didactic literature. The work dates back to the rise of the Karakhanid state (11th century) and, in a sense, the way of governing the vast empire, politics, laws, order, as well as the material and spiritual life, worldview, traditions, customs of the peoples living here. It is a large-scale encyclopedic guide, a proverb, which reflects the whole existence of habits, moral concepts, moral principles, and norms. It raises many philosophical problems peculiar to the spiritual pursuits of the great medieval thinkers. The famous Russian orientalist and academician A.N. Kononov was right when he said about this work. "It is a philosophical work that analyzes the meaning and significance of human life in society" [1].

RESEARCH METHODS

The work has four symbolic images: King Kuntugdi (day of birth) - justice, Minister Aituldi (full moon) - happiness and the state, Son (full of mind) - intellect, intelligence and ascetic Change

(awakened) - recovery, mutual question and answer of satisfaction, written in the form of debates.

The range of philosophical issues raised in the book is very wide and diverse: the universe and its structure, the universe of nature, consciousness, knowledge, man and his place in society, the meaning of life, happiness and the state, man and humanity, death and eternity, education and training, occupation, family spirituality, child rearing, etc. [2].

RESULTS AND DISCUSSIONS

The author's daily, practical way of life philosophical observation of his life position, theoretical generalization. The work is the first shining example of the philosophy of compromise. The influence of the Eastern peripatetics (followers of Aristotle's teachings), in particular, Farabi, Beruni, Ibn Sina, as well as the philosophy of mysticism, is clearly felt in it. There are elements of positivism in his philosophical views. Yusuf Khas Hajib made a great contribution to the development of realistic ideas in the worldview of medieval thinkers.

An analysis of the author's views on existence and its structure shows that thinker was well versed in the natural sciences and had a deep knowledge of astronomy and mathematics. His views on the subject are close to those of Aristotle and Ptolemy, and his imagination is pantheistic. He perceives nature, being, as the manifestation of God. According to him, God is a substance, he is the impersonal, the first cause of the world. Existence



and the things in it emerged step by step from a single beginning.

In the chapter on the seven planets and twelve constellations of the thinker, he emphasizes that the whole universe and all inanimate and animate beings in the universe: the universe, the sun, the moon and stars, the dark night and the bright day were created by God for the people. It says that beings, including celestial bodies, are in constant motion, that planets and stars are constantly rotating, some of them moving upwards and some of them moving downwards. He advocates the theory that the earth is round and rotates around its own axis, and that the change of seasons and day and night is related to its activity. The fact that the universe came into being from four material elements: grass, water, air and earth, suggests that these elements are contradictory and at the same time interdependent. It asserts that the universe, which is essentially one, operates on the basis of its own natural laws. The philosopher's simple materialism is associated with his simple spontaneous dialectical views. According to him, the events in nature and society are interrelated and evolving, the universe is infinite and colorful - it is objective, not dependent on the human individual. Man lives in the world, in nature. The fundamental difference between man and other concrete objects and beings in existence is that he is a perfect being, capable of thinking, knowing, and creating.

Yusuf Khas Hajib's idea of developing the doctrine of the four elements of being and applying it to the realm of social being is a remarkable innovation. According to him, the four elements of social existence - the beginning is justice, happiness - happiness, reason - intelligence and contentment, that is, the four heroic qualities of the work. These four human values must be the basis and driving force of the essence and activity of human life.

In his work, Yusuf Khas Hajib paid special attention to the issues of epistemology, the theory of knowledge. The very title of the book, *Kutadgu Bilig* (Knowledge That Leads to Happiness), demonstrates the thinker's firm belief in the theory of knowledge, the essence of knowledge, and its possibilities. The play deals with the issues of knowledge, its nature, infinity, infinity. His views in this area have a materialist tendency. In his views, the philosopher follows the path of Farabi and Ibn Sina and takes the position of rationalism.

According to the thinker, knowledge is an objective reflection of being, it is a process, and man is closely connected with real reality. The essence of man is in cognition (an important feature that distinguishes him from animals), cognition plays a decisive role in human life.

He correctly understood that there is an opportunity to know the environment, the material world around us in all its diversity, and that it is necessary to use this opportunity.

In his philosophical views, Yusuf Khas Hajib emphasizes that the mind is illuminated by the torch of knowledge, that knowledge is not without knowledge, that in order to understand the essence of the world and life, to know it more deeply, to use the creative power of the mind more effectively, one must constantly replenish one's knowledge. After all, knowledge gives a person health, intelligence, soul, happiness - "What in the world is more valuable than knowledge?").

He believes in the infinite possibilities of the human mind. His views on the fact that the process of penetrating the essence of existence, including natural phenomena, knows no boundaries are extremely noteworthy. In his view, knowledge should serve to guide human life activities in the right direction. Knowledge must provide a strong connection with real life, make rational use of natural resources, and serve to create a happy life on earth.

Yusuf Khas Hajib's ideas about knowledge were imbued with a high humanistic spirit, which was a great courage, a very progressive phenomenon for the socio-enlightenment environment of that time.

At the same time, we see the limitations and one-sidedness of the thinker's views in the field of epistemology, which can be traced back to the level of that period. In particular, there are elements of irrationalism in his views, he understands cognition metaphysically, that is, he understands cognition as something, a direct, direct reflection of events in the human mind, knowledge as a simple quantitative set[3].

Explaining the events and processes of nature and society, the author effectively uses dozens and hundreds of examples showing the application of philosophical laws and categories in them, the skillful and appropriate application of which amazes any reader. While admonishing Kuntugdi (the civil king), Zahid said that religion and the world are opposite, that the paths of the two are separate, not one, that one is near, that one is far, and that one holds the two together, and that one goes astray. Or flowing water, fluent language, happiness - the state does not stand still; if something is created, it will surely disappear, what came into the world will go away; the fallen rises, the rising falls, the light darkens, the walk ceases; unfaithful world (old) deeds - girl; if you want joy, sorrow accompanies it (dialectics; unity of opposites and the law of struggle). The older a person gets, the more headaches he has; do not be unaware, life passes unnoticed, this passing time, the days do not return again; a long-spoken word becomes boring (the law of transition from quantitative change to



qualitative change). The moon is born small when it is born, then grows up, rises high, fills up, begins to erode when it reaches its highest point, begins to reappear on the night of its rebirth (the law of negation). No matter how beautiful the appearance of a melon - the smell, the image or the shape - if there is no taste in it (taste), it will have to be discarded (essence and phenomenon, appearance). God created the cause of all things, all good and evil depend on him, the son - the cause of the daughter - the father and mother, if his behavior is corrupted or improved again, they are the cause (cause and effect) to him. This is a field in the world, and whatever you sow will be forgotten in the future. If it does not utter a word, it is equal to pure gold, if it is taken out of the tongue, it is equal to a yellow coin (chance and reality) and so on[4].

CONCLUSION

The philosopher emphasized the role and importance of the epistemological function of philosophy in the field of education. Knowledge is the same as virtue, it is the foundation of all human success. Knowledge is enlightenment, knowledge is a good friend, knowledge is an inexhaustible wealth that cannot be stolen, knowledge is a chain that prevents evil. A person attains perfection only through deep mastery of knowledge. Only through enlightenment can the moral environment of society be healed. The great truth that Khas Hajib understands is that man not only subdues nature through knowledge, but also cultivates in himself the virtues, attains perfection, leaves a good name, and is involved in eternity.

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ANALYSIS OF THE CRITICAL SUCCESS FACTORS (CSFs) OF PUBLIC PRIVATE PARTNERSHIP (PPP) ON INFRASTRUCTURE DELIVERY IN NIGERIA

Mu'azu Umar¹, Ali Caleb Joshua², Jibrin Abdullahi Mairiga³,
Jibril Muhammed I.⁴

^{1,2}Department of Quantity Surveying, Federal Polytechnic Nasarawa

^{3,4}Department of Building Technology, Federal Polytechnic Nasarawa

ABSTRACT

For rapid development and accelerated growth of the construction sector in Nigeria, the public private partnership (PPP) if embraced by the all the level of government and the private sector will improve and enhance accelerated growth of the industry. The purpose of this paper is to examine the types of infrastructural projects most suitable using public-private partnership (PPP) for execution and identify the critical success factors in PPP on infrastructural projects with a view to strengthening the partnership between the public (government) and private sector. The overall goal is to enhance infrastructural projects delivery in Nigeria. The primary data consists of survey questionnaires, drawn based on the identified factors on existing literature on critical success factors (CSFs). The structured questionnaires were administered on participants that were involved in the execution of projects through PPP arrangements. The results from the analysis indicate the provision of electricity and water with RII of 0.65, health and social services with RII of 0.63 and transport with RII of 0.62 with the rank of 1st, 2nd and 3rd respectively. However on the critical success factors (CSFs), the study identifies involvement of government providing guarantee with RII of 0.70, committed and organized public sector with RII of 0.69 and cost and benefit assessment that is realistic with RII of 0.68 with the ranks of 1st, 2nd and 3rd respectively. What needs to be done is to ensure that all the success factors responsible for successful implementations of PPPs are well structured in a way that its optimum performance can be guaranteed. Also, in identification of the critical factors in PPP it would help to develop a body of PPP knowledge. This knowledge would help in the establishment of relevant laws, guidelines and regulations and in the development of efficient frameworks for best PPP practices.

KEYWORDS: Critical success factor, Infrastructural projects, PPP, Private sector, Public sector,

INTRODUCTION

The challenges in Nigeria infrastructure deficit towards the social and economic development of the country has compel the Federal government to realize that private sectors involvement and participation in the provision of infrastructure is a key factor to sustainable development. The construction sector has remained very critical for social and economic development of both developed and developing nations (Oyedele, 2012) as it provides linkages between manufacturing and market thereby creating massive employment opportunities. Lack of private sector participation in the provision of public infrastructure has been identified as one of the factors hindering the advancement of Nigeria positively (Ajanlekoko, 2001).

PPP is regarded globally as a panacea for the deficit in infrastructure but in Nigeria, it has not gain total acceptance. This situation has caused diminishing interest of both local and foreign investors to participate. For instance the concession of 105 km road for the construction of Lagos – Ibadan Expressway valued at US\$597 million which was awarded in 2009 under BOT model was revoked in November 2012, the concession of Murtala Muhammed Terminal 2 Airport (MMA 2) commissioned in April 2007 has been in controversy till today between the Federal government of Nigeria and the concessionaire over the concession period which was valued at US\$250 among other cases (Lucas, 2011). The question that agitates mind is why has it (PPP) been successful in South Africa, Australia, UK and other developed nations and become



unsuccessful in Nigeria? This paper is aimed at evaluating the critical success factors of PPP and the objective is to identify and evaluate the projects suitable under PPP

LITERATURE REVIEW

PPPs and the Nature of Infrastructure in Nigeria

The development of infrastructure is among the backbone of assessing the achievements of government. There is high agitation for the development of infrastructure in developing nations as compared to countries that are developed due to the fact that the resources for infrastructure provision are scarce. The initiation of infrastructure projects should be specifically done by an office established to do it as advised by the Office of Government Commerce (OCG) (2008).

In Nigeria, the report on infrastructure with other developing nations is nothing to write home about. The situation of infrastructure is in a state of sorry both quantitatively and qualitatively (Onibokun & Kumuyi, 1996, Agbola 1998, Nubi 2000, Ajanlekoko 2001, Oyedele 2006). Most of the infrastructures are in a state of decay and need refurbishment, repair, rehabilitation and replacement. Planning, organizing, controlling and supervision of people to have conducive environment is the responsibility of the government. The governments have the authority and power to put all measures in place that would make the environment sustainable and beneficial for all to live.

The challenges also include the requirement (quality) of projects to compete or meet international standard. They must meet the requirements for carbon emissions, air capture analysis to emit green house gasses (GHGs) and the preservation of natural environment for sustainable development.

A PPP arrangement as defined by Tang et al., (2010) is a contractual relationship (normally long time) between a public sector and a private partner (or private firm consortium) for the development or construction and operating a facility (infrastructure). The responsibility of building, managing and maintaining the asset lies with the private partners including service provision, finance investment for regular payments exchange by the government and/or charges user. Under the PPP arrangement/scheme, the private sector owned the facility/assets, however there is provision for transferring the initial (legal) property at the contract end to the public sector (Ke et al., 2010).

Yescombe, (2007) opined that there are different names for PPP and they include Public Finance Initiative (PFI), a term which originates from Britain and now widely used in Japan and Malaysia, P3 or 3Ps

widely used in North America, Private-sector participation which is a term used in finance-development sector, is applicable or used in Australia. PPP have so many variants used in infrastructure projects execution to the public. The variants include; BOT, Build-transfer-operate, design-build-operate-maintain, build-own-operate, design-build-finance-operate among others (Zhang and Kumaraswamy 2001). Research conducted by Deliotte (2007) identified joint venture, bundling and alliancing as hybrids of PPP. The table below shows the classification of PPP models based on sector which were adopted in different countries.

CRITICAL SUCCESS FACTORS IN PUBLIC PRIVATE PARTNERSHIP (PPPS)

Critical success factors defined by Rockart (1982), as few key areas of activities in which results that are favourable and necessary for a manager to attain his goals. However, different researchers have studied critical success factors (CSFs) in PPP projects. CSFs in infrastructure delivery as identified by Grant (1996), as appropriate risk allocation and risk sharing and multi-benefit objectives. Jones (1996) identified CSFs in the delivery of infrastructure to include legal framework that are favourable and a public agency that is organized, Stonehouse et al. (1996) further identifies more CSFs as involvement of the government in providing support, authority sharing between the public and private sectors and public private sectors commitment. Tiong (1996) identifies public private partnership (PPP) CSFs based on the model of BOT as technical feasibility of projects, strong and stable private consortium, stable macro-economic environment, and legal frame work (favourable). Qiao et al., (2001) identified CSFs as stable macro-economic environment, technical innovation, technology transfer and technical innovation, financial market availability, social support and political stability, good governance and projects technical feasibility.

Hardcastle et al., (2006) in his study groups PPP critical success factors under five groups. These include;

- 1) *Efficient procurement* – These include procurement process transparency, procurement process competition, good governance, public agency that is organized and committed, social support, public and private sectors share authority and through assessment of benefits and cost realistically.
- 2) *Implementation of projects* – Includes legal framework that is favourable, technical feasibility of projects, risk allocation and



sharing, responsibility and commitment of public and private sectors and good and strong private consortium.

- 3) *Government guarantee* – Comprised the provision of guarantee by the government, objectives that are multi-benefits and potential support.
- 4) *Good and favourable economic condition* – stable macro-economic conditions and economic policy (sound).
- 5) *Financial market availability* – Adequate and stable financial market availability.

THE CHALLENGES OF PPP IN NIGERIA

In Nigeria, PPP is not new, in the nineties it became prominence. The Lagos State government developed the Dolphin Estate in the eighties through PPP arrangement with HEP Construction Limited. Also the Oil industry development immediately after oil was discovered in the Niger Delta (Oloibiri, Bayelsa State) in 1956 was also through PPP. Presently, attempts to adopt the use of the PPP method in construction failed in Nigeria so many times. This is due to the fact that most of the stakeholders do not understand the PPP principles.

The development and maintenance/management of Lagos -Ibadan Expressway into five lanes by Bicourtney Concession failed because the concession could not be financed adequately. The Guto-Bagana bridge over River Benue between the Federal Government of Nigeria, Kogi and Nasarawa State government is also a PPP project. The counterpoint fund of N1 Billion was paid by Nasarawa State to the development partner, but other development partners did not pay their commitment as they claimed they have no money. The leverage left now is how drawn agreement are bad which favours the concessionaires. Victoria Island-Epe Express Road in Lagos State failed as a result of Lekki Concession Company (LCC) (concessionaire) did not carry along other stakeholders. The Murtala Muhammed Airport Messrs Meavis airport landing fee-collection at Ikeja also failed due to

heavy non – receipted amount (upfront) paid by the concessioner.

RESEARCH METHODOLOGY

The population targets for this study are the stakeholders that are involved in PPP projects within the Federal Capital Abuja. The population for the study includes public sector authorities (ministries, departments, agencies etc) and the private sector authorities. A total of 100 questionnaires were administered to respondents organisation out of which 56 were retrieved and only 50 were completed and found suitable for the analysis representing 89.2%. The questionnaire was divided into two sections. Section A comprises information on respondent year of experience, academic qualifications and number of projects executed under PPP model. Section B was structured and designed in line with the objectives of the study. However, the questions were designed based on a 5-point likert scale rating with 5 being the highest in ranking.

RESULTS AND DISCUSSION

Table 1 below shows the respondents type of organisation, academic qualification, years of experience and number of PPP projects participated. The response shows that the public sector authorities have 36% while the private sector has 64%. The table further shows the respondents academic qualification. Thus 36% of the respondents obtained Master degree, 24% obtained Bachelor degree while 40% obtained Higher National Diploma. The table further indicates the years of experience of respondents as 34% have more than 20 years experience, 20% have 16-20 years experience, 16% have 11- 15 years experience while 12% have 6-10 years of experience while 18% have less than 5 years experience. However on the number of PPP projects executed, 42% participated in 1-3 projects while 36% and 22% participated in 2-5 projects and above 5 projects respectively.

**Table 1: Respondents Background Information**

Item	Category	Frequency (n)	Percent (%)
Type of organisation	Public	18	36.00
	Private	32	64.00
	Total	50	100.00
Years of experience	Above 20	17	34.00
	16-20	10	20.00
	11-15	8	16.00
	6-10	6	12.00
	< 5	9	18.00
	Total	50	100.00
Number of PPP projects	1-3	21	42.00
	3-5	18	36.00
	5 and above	11	22.00
	Total	50	100.00

Source: Authors survey 2018

Table 2 below shows the responses of the types of projects that are suitable for execution under the PPP agreement within the study area. Results from the table reveals that the provision of electricity, health and social services and transportation (road, airport and

railway) are best suitable for execution under the PPP arrangement with a RII of 0.65, 0.63 and 0.62 with mean score of 3.26, 3.16 and 3.12 with ranks of 1st, 2nd and 3rd respectively.

Table 2: Evaluation of projects suitable through PPPs**Ranking of the Projects suitable through PPP model**

Project type	N	5	4	3	2	1	Sum	Mean	Relative Importance Index	Rank
Transport (road, airport, railway)	50	13	10	7	10	10	156	3.12	0.62	3 rd
Provision of electricity and water	50	10	14	11	9	6	163	3.26	0.65	1 st
Environmental and natural resources	50	9	8	12	13	8	147	2.94	0.59	4 th
Health and social services	50	11	12	9	10	8	158	3.16	0.63	2 nd
Leisure, tourism and culture	50	4	10	13	12	11	134	2.68	0.54	6 th
Real Estate	50	5	5	12	13	15	125	2.50	0.50	7 th
Educational	50	7	9	14	11	9	144	2.88	0.58	5 th

Source: Authors survey 2018

Table 3 below shows the evaluation of the critical success factors in PPPs for effective delivery of infrastructure. Results from analysis reveals the strong critical success factors (CSFs) as government involvement in the providing guarantee, committed and organized public agency and cost and benefit

assessment that is realistic and thorough, favourable framework and private consortium that is good and strong with mean score values of 3.48, 3.46, 3.44, 3.24 and 3.22 and RII of 0.70, 0.69, 0.68, 0.65 and 0.64 respectively.

**Table 3: Critical success factors of PPPs****Ranking of the critical success factors of PPP**

Critical success factors	N	5	4	3	2	1	Sum	Mean	Relative Importance Index	Rank
Financier market availability	50	8	10	9	12	11	142	2.84	0.57	8 th
Sound economic policy	50	12	10	9	11	8	157	3.14	0.63	6 th
Risk allocation and risk sharing appropriately	50	11	12	9	10	8	158	3.16	0.63	6 th
Macroeconomic condition that is stable	50	6	9	7	13	15	128	2.56	0.51	9 th
Technical feasibility of project	50	10	12	9	11	8	155	3.10	0.62	7 th
Competitive process in procurement	50	9	7	7	14	13	117	2.34	0.47	10 th
Procurement process transparency	50	8	9	11	12	10	143	2.86	0.57	8 th
Private consortium that is good and strong	50	14	10	8	9	9	161	3.22	0.64	5 th
Committed and organized public agency	50	15	12	10	7	6	173	3.46	0.69	2 nd
Involvement of government in providing guarantee	50	12	13	15	6	5	174	3.48	0.70	1 st
Cost and benefit assessment that is realistic and thorough	50	15	12	9	8	6	172	3.44	0.68	3 rd
Favourable framework	50	10	12	15	6	7	162	3.24	0.65	4 th
Authority sharing between public and private sectors	50	6	10	17	5	12	143	2.86	0.57	8 th

Source: Authors survey 2018

CONCLUSION

In order to achieve an accelerated growth of the construction sector in Nigeria, successful PPP should be designed and taken into consideration its implementation within the context of its partnership. This paper identifies electricity and water supply, health and social services and transport as the projects suitable for execution under PPP model. The paper further identifies the critical success factors of PPP in which involvement of the government in providing guarantee, committed and organized public agency and realistic cost and benefit assessment.

RECOMMENDATIONS

This paper recommends that the identified barriers and the critical success factors are to begin consideration by both the public and private parties to ensure successful implementation of projects to be executed under the PPP arrangement so as to accelerate the growth of the construction sector hence, achieve value for money and optimum objectives of the arrangement.

Secondly, international organisations in conjunction with the Nigerian government should organize training workshops and conferences for both the sectors (Public and private) to enhance their capabilities in PPPs.

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JURIDICAL ANALYSIS OF LAW ENFORCEMENT ON CRIME OF PROCUREMENT OF GOODS AND SERVICES IN THE PERSPECTIVE OF STATE FINANCIAL PROTECTION (RESEARCH STUDY AT POLICE RESORT IN TANJUNG PINANG)

Fitrananda^{1*}, Laily Washliati², Idham³
¹⁻³Faculty of Law, Universitas Batam, Indonesia

*^{*1}Corresponding Author*

ABSTRACT

The activities of procuring goods/services eventually have negative implications for very complicated juridical issues. Not infrequently, juridical problems arise triggered by excessive attitudes from direct superiors in the ranks of implementing goods/services procurement activities and at the level of users of goods/services and the existence of collusion between Procurement Officials and providers of goods/services to cheat. The threat of punishment almost stalks the work of procurement officials, users of goods and services, and providers of goods and services in every line of procurement activity, from the needs planning process until the completion of all activities to obtain goods and services. The problem in this research is how to regulate the law on the crime of procuring goods and services in the perspective of state financial protection (Research Study at Police Resort in Tanjung Pinang). What is the implementation of Law Enforcement for the Crime of Procurement of Goods and Services in the Perspective of State Financial Protection? (Research Study at Police Resort in Tanjung Pinang). What factors are obstacles or obstacles and solutions for law enforcement for criminal acts of procurement of goods and services in the perspective of state financial protection? (Research Study at Police Resort in Tanjung Pinang). This study aims to determine the Legal Arrangements for the Crime of Procurement of Goods and Services in the Perspective of State Financial Protection (Research Study at Police Resort in Tanjung Pinang), to determine the implementation of a juridical analysis of Law Enforcement of Criminal Acts of Procurement of Goods and Services in the Protection Perspective State Finances (Research Study at Police Resort in Tanjung Pinang), to find out the factors that become obstacles or obstacles as well as Solutions for Law Enforcement of Criminal Acts of Procurement of Goods and Services in the Perspective of State Financial Protection (Research Study at Police Resort in Tanjung Pinang). This study uses a descriptive method by using a normative approach (legal research) to obtain primary data through field research. The study results indicate that the Legal Arrangements in Law Enforcement of Criminal Acts of Procurement of Goods and Services in the Perspective of State Financial Protection (Research Study at Police Resort in Tanjung Pinang) have basically been implemented well. Although there are still many obstacles in the field, especially the legal substance, it is hoped that law enforcers will be more careful in applying an article of a piece of legislation in a trial to injure justice for the community.

KEYWORDS: *Criminal Crime, Procurement, Goods, Services, and Finance.*

INTRODUCTION

For the first time, the concept of good governance appeared to be adopted by practitioners in international development institutions, which contains the connotation of effective performance related to public management and procurement of goods and services. The emergence of this concept originated from the interest of donor institutions such as the United Nations (UN), World Bank, Asian Development Bank (ADB), and International Monetary Fund (IMF) in providing capital loan

assistance to developing countries. In subsequent developments, good governance is set as a condition for countries that need loan funds so that good governance is used as a determining standard to achieve sustainable and equitable development (Sadjijono, 2015).

Indonesia has established the direction and objectives for its development per the concept of good governance, as stated in the Law of the Republic of Indonesia No. 17 of 2007 on the National Long-Term Development Plan and the Decree of the



People's Consultative Assembly of the Republic of Indonesia No. III/MPR/1993 on the General Guidelines. The State Policy (GBHN), as well as the Preamble to the 1945 Constitution, define the direction and objectives of the Indonesian economy and nation-building, namely protecting the entire nation and homeland of Indonesia, promoting public welfare, educating the nation's life, and participating in the implementation of a world order based on independence, lasting peace, and social justice.

To achieve the country's development objectives, the Government is enhancing the current system, ensuring that the aspirations of the whole Indonesian populace may be fulfilled promptly. The present transformation of government governance is increasingly resulting in government administration based on good governance (good administration principles), as the executor of state government established based on public trust and state availability. Additionally, it is required to follow the principles of good governance in carrying out its different operations, which would result in the welfare of the people in a welfare state.

Realizing good governance must be supported by Human Resources (HR), the rules and morals of the implementing apparatus must be good. However, the real obstacle in realizing people's welfare and for realizing good governance is the high level of abuse of state finances by irresponsible elements and causing enormous state losses, so systems and regulations are needed to accommodate these problems. The concept of good governance is realized if the Government is carried out in a transparent, responsive, participatory manner, obeys the rule of law, is oriented towards consensus on the existence of togetherness, accountability, and has a strategic vision (Sadjijono, 2015).

Presidential Regulation Number 54 of 2010, concerning government procurement of goods and services in conjunction with Presidential Regulation Number 35 of 2011, concerning amendments to Presidential Regulation Number 54 of 2010, concerning procurement of government goods and services in conjunction with Presidential Regulation Number 70 of 2012, concerning the Second Amendment to Presidential Regulation Number 54 of 2010. In 2010 concerning the Government's Procurement of Goods/Services (hereinafter referred to as the Presidential Regulation on the Procurement of Government Goods/Services) in a very detailed and careful manner, it has formulated all provisions relating to the process of the Government's goods/services procurement activities. However, in its implementation, there are still many problems due to the Presidential Decree. This case is very technical, and the regulations are fragmented, scattered in technical and implementation guidelines (fragmentation).

The activities of procuring goods/services eventually have negative implications for very complicated juridical issues. The juridical problems that arise are often triggered by excessive attitudes from direct superiors in the ranks of implementing goods/services procurement activities and at the level of users of goods/services and the existence of collusion between Procurement Officials and providers of goods/services to cheat. The threat of punishment almost stalks the work of procurement officials, users of goods and services, and providers of goods and services in every line of procurement activity, from the needs planning process until the completion of all activities to obtain goods and services.

This study discusses the juridical analysis of criminal law enforcement, especially against criminal acts of procurement of goods and services, which in the conception of the Indonesian state of the law is felt more seriously, at least for specific reasons. The influence of the global legal system on the development of the legal system in Indonesia, especially the development of the criminal law system. This condition significantly affects the development of laws and regulations governing the criminal Act of procuring goods and services as a product of legal politics in Indonesia. The laws governing the procurement of goods and services have been confused by the problematic character of the criminal law system. It is full of uncertainty and is even controlled by various sub-systems of the legal system influenced by the developing global legal system. For instance, the Civil Law System, Common Law System, Socialist Communist Law System, the Muslim Law System, and the customary law system and traditions have become the local community's legal culture, including the influence of the Chinese Law System. The most decisive influence of the global legal system on the criminal law sub-system (positive law) is the Civil Law System. It is a criminal law system inherited from the Dutch East Indies. Second, as the main obstacle in law enforcement for the criminal Act of procuring goods and services, it is faced with the problem of actualizing the criminal justice system due to the weakness of harmonization and synchronization with the criminal law system, especially in the decentralized system between central and regional policies, there is no particular regulation on the criminal justice system that is integrated in the criminal justice system handling various criminal acts related to criminal acts of procurement of goods and services, which have implications for conventional judicial decisions with acquittal, SP3 and light sentences, as well as the trend of increasing goods and services procurement crimes, settlement of small cases, and losses to state finances or the state economy as the main elements of crime The crime of



procurement of goods and services is very large, so that factual conditions are the main obstacle in applying the law to cases of procurement of goods and services as a whole.

Meanwhile, the politics of criminal law against the crime of procuring goods and services brings a change or renewal of perspective on the crime of procuring goods and services into a form of extraordinary crime.

So that the legislation governing the eradication of the procurement of goods and services should be prioritized in its formation, the corruptors are despicable and detrimental to society. On a large scale, the state is often not covered by written laws and regulations without criminal offenses for the procurement of goods and services, so that formal actors in the procurement of goods and services can act freely by hiding behind the principle of legality. The handling of various criminal cases involving the procurement of goods and services must be handled in extraordinary ways. However, by regulating various criminal provisions for crimes that have the potential to harm the country's finances or economy outside the law on the procurement of goods and services, It cannot be handled extraordinarily, considering that the regulation of various crimes is not categorized as a crime in the procurement of goods and services, even though it can harm the country's finances and economy.

In the legal structure, especially in the application of the law based on various formal and material laws and regulations for eradicating criminal acts of procurement of goods and services, various institutions regulate law enforcement that handle the procurement of goods and services, such as police, prosecutors, judges, KPK, the Anti-Corruption Task Force Team and related institutions such as BPK, BPKP, PPATK, including advocacy institutions, NGOs, and internal and external control institutions. For example, at the investigation stage, various investigative institutions have the authority to carry out investigations of criminal acts under the law, which is the legal basis for each. Thus, the legal problems that then arise with the regulation of each law enforcement agency for the crime of procuring goods and services are the occurrence of various gaps in financial capital, overlapping authorities. Also, partial differences in authority limit the investigation of criminal acts of procurement of goods and services and have procedural laws in addition to the consequences of the weak integrity of law enforcement. Therefore, the goal of eradicating the crime of procuring goods and services cannot be achieved effectively, even if it is minimal compared to people's expectations for enforcing the rule of law and justice in Indonesia.

The legal culture, eradication of criminal acts of goods and services procurement, is associated with

the trend of criminal acts of procurement of goods and services in Indonesia, which continues to increase and is still ranked 2nd in Asia and 6th in the world. Meanwhile, from various dimensions, the constraints of the criminal law system as an implication of the weak aspects of a legal substance that regulate various crimes related to the procurement of goods and services, the weak level of coordination, supervision, and harmonious integration from the aspect of the legal structure have implications for weak law enforcement efforts against the procurement of goods and services in Indonesia. The complexity of the problem shapes the legal culture of the community and the image of law enforcement agencies that are getting worse. The product of legal politics is the effort to eradicate the procurement of goods and services. Also, the application of law in eradicating the procurement of goods and services, the results of which are controversial, such as corruptors with an acquittal, SP3, running away, or suddenly getting sick in order to escape from legal bondage. Many judicial decisions, criminal acts of goods and services procurement with very light legal sanctions such as sanctions against ordinary crimes, are the main priority because they result in financial losses, the state economy, and extraordinary bad aspects of social life. The perpetrators of goods and services procurement should be classified as perpetrators of Extraordinary Crime given severe sanctions or commensurate with their actions.

The phenomenon of the criminal law system, especially law enforcement against criminal acts of procurement of goods and services as described above, has an impact on decreasing the level of public trust in law enforcement officers. Especially in providing legal certainty and the fulfillment of a sense of justice through efforts to overcome criminal acts of procurement of goods and services that are more detrimental to the state. The low legal culture of this community can also be reflected in the formation of various monitoring institutions for the procurement of goods and services and other law enforcement institutions, such as the KPK, BPKP. This legal culture also has an impact on the weakness of law enforcement itself, so that this cycle becomes a system that influences each other. In the end, law enforcement efforts are considered sterile by the community, contrary to the ideals of law in the perspective of the criminal law system and the criminal justice system in Indonesia and hindering the achievement of a sense of community justice.

Problems hindering the eradication of criminal acts of procurement of goods and services, in the investigation of cases of procurement of goods and services; according to Article 36 paragraph (1) of Law no. 32 of 2004 concerning Regional Governments, inspections can only be carried out with the permission of the President. This case



contradicts Article 27 paragraph (1) of the 1945 Constitution that "All citizens have the same position in law and Government and are obliged to uphold the law and Government with no exceptions.

The procurement of goods and services in legal practice in Indonesia has been a central issue. Behavioral diagnoses regarding the procurement of goods and services seem to be increasingly endemic and tend to seem entrenched and become an epidemic spreading in all aspects of people's lives. As a result, the nation and state were hit by multiple crises that began with the monetary crisis. The credibility and ability of law enforcement are weakened. This case is a challenge for the enforcement of the criminal law system, especially in applying the criminal justice system for the goods and services procurement in law enforcement.

In law enforcement practice in Indonesia, the phenomenon of poor implementation of the criminal law system always appears in society. It is indicated that every opportunity for the procurement of goods and services is always indicated by the controversy over judicial decisions and the results of the handling of goods and services that are considered sterile. Almost every printed, electronic, and digital information media contains information on the procurement of goods and services, which reflects the weakness of efforts to eradicate the procurement of goods and services which, if studied more deeply, there are complexities and problems in the criminal law system adopted in Indonesia and have an impact on the criminal justice system.

Based on this background, the following problems can be formulated. (1) What is the legal arrangement for the criminal Act of procuring goods and services from the perspective of state financial protection?

(2) How is Law Enforcement Implemented on Procurement of Goods and Services Crimes in the Context of State Financial Protection (Case Study at Polres Tanjung Pinang)? (3) What are the impediments/obstacles to law enforcement for the crime of procuring goods and services in the context of state financial protection (Case Study at Polres Tanjung Pinang)?

Following the problems described above, this study aims to (1) find out the legal arrangements for the criminal Act of procurement of goods and services in the perspective of State Financial Protection in Indonesia; (2) understanding the implementation of law enforcement on the procurement of goods and services crime from the standpoint of state financial protection (a case study at the Tanjung Pinang Police Station); (3) understanding the impediments/obstacles to law enforcement for criminal acts of procurement of goods and services in the context of state financial

protection (a case study at the Tanjung Pinang Police).

The results of this study are anticipated to benefit all stakeholders, including the authors. Theoretically, the findings of this study should contribute to the advancement of legal science, particularly the science of law enforcement of criminal procurement actions in the context of state financial protection. In practice, this study is expected to benefit the Tanjung Pinang Resort Police (Polres) by supporting them in performing their duties more effectively. That is because the study's findings offer an explanation for the Law Enforcement of Criminal Acts of Procurement of Goods and Services from a State Financial Protection Perspective. The findings of this research will assist society in its pursuit of legal certainty. This is because the study's findings offer justifications and recommendations for the rules and regulations governing the Procurement of Goods and Services Crime in the Context of State Financial Protection.

LITERATURE REVIEW

The theory is a collection of constructs, definitions, and propositions that provide a systematic perspective of phenomena by specifying relationships between variables so that they may be used to explain and predict phenomena (Sugiyono, 2013). The theory is a flow of logic or reasoning, a systematic arrangement of concepts, definitions, and propositions (Sugiyono, 2013). In general, function theory encompasses the functions of explaining, predicting, and controlling a symptom. The theory used in a study must be precise since the function of theory in a study is to clarify and refine the scope or construction of the variables to be studied, to formulate hypotheses and develop research instruments, as well as to predict and discover facts about the subject being researched (Sugiyono, 2013). Theories include assertions regarding specific phenomena, and these assertions must be validated via study. Research is a rigorous, systematic, and consistent scientific activity, including analysis and creation (Soekanto, 2007). When writing scientific articles, theoretical frameworks are critical since they guide resolving research issues. A theoretical framework provides a way for researchers to advance normative ideas pertinent to the study being conducted and explain the research variables and their connections.

JURIDICAL ANALYSIS

An analysis is the process of synthesizing a considerable quantity of raw data and then grouping or isolating the relevant components and pieces to connect the gathered data to solve the issue. An analysis is an attempt to consistently describe patterns in data so that the analysis's results can be studied,



translated, and given meaning. In contrast, juridical is recognized by law, based on law, and things that create regularities and have an effect on violations, which is considered law or whose validity is justified in the eyes of the law, whether in the form of regulation.

In this research, the authors define juridical analysis as an activity that entails identifying and dissecting the components of an issue for further examination and then relating them to the law, legal regulations, and relevant legal standards as a means of resolving the problem. The purpose of the juridical analysis is to collect pertinent laws and other pertinent facts to make judgments regarding potential remedies or solutions to issues. The juridical analysis activity aims to develop a mentality for legislation problem resolution, particularly law enforcement in the procurement of goods and services.

LAW ENFORCEMENT

Law enforcement is a system in which members of the Government work cooperatively to enforce the law by finding, preventing, recovering, and punishing those who violate the laws and legal norms regulating the society in which the law enforcement members work.

PROCUREMENT OF GOODS AND SERVICES

In general, procurement of goods and services is a process that begins with the planning of requirements and ends with the completion of all procurement operations. The procurement of products and services may be split into two categories. To begin, the government sector's procurement of goods and services. The procurement of goods and services is notoriously difficult to execute in the government sector. The procedure must conform to the established norms and must not violate them in any way. Meanwhile, the procurement process for goods and services in the non-government sector or private sector is often more straightforward and less complex than the procedure for acquiring government goods and services. In the non-government sector, procurement regulations often relate to the policies of the respective agencies or corporations.

Both the public and private sectors must adhere to procurement's fundamental values or principles while carrying out the procurement process. These fundamental values or underlying values serve as guides or foundations for conducting procurement activities for products and services.

LEGAL CERTAINTY

Legal certainty is a condition where there is no public confusion regarding the rule of law, both in terms of regulation and implementation of law enforcement.

Based on this understanding, regulation and law enforcement can create legal uncertainty in terms of:

- 1) There is a discrepancy between one rule of law and another.
- 2) Legal regulations or decisions made by legal institutions (executive, legislative, or judicial) violate applicable legal rules.

STATE ADMINISTRATIVE LAW

In finding a good understanding of state administrative law, it must first be determined that state administrative law is part of public law, namely the law that regulates government actions and regulates the relationship between the Government and citizens or the relationship between government organs. State Administrative Law contains all of the rules that govern how government organs carry out their duties. So, state administrative law contains the rules of the game relating to the functions of government organs. With regard to the foregoing, in general, state administrative law includes actions of the Government (central and regional) in the public sector; Government authority (in carrying out actions in the public sector); Legal consequences born of actions or use of government authority; and Law enforcement and the application of sanctions in the government sector (Eddy, 2009).

The decision on the use of goods is the decision of state/regional officials. In the event of a state administrative dispute, the party who is harmed (providers of goods and services or the public) due to the issuance of a TUN Decree can file an objection to the agency that issued the decision if no solution is found. Legal subjects, both individuals and civil law subjects, can file a written cancellation lawsuit through the Administrative Court with or without a claim for compensation or rehabilitation, as regulated in Law Number 51 of 2009 concerning the Second Amendment to Law Number 5 of 1986 concerning the Judiciary State Administration.

CIVIL LAW OR CIVIL CODE

It is defined as the law that regulates the relationship between legal subjects and other legal subjects in the civil sector. Civil law refers to legal traffic between individuals, such as legal relations with family, agreements between legal subjects, and legal relations in the field of inheritance. Regarding the procurement of goods and services, civil law regulates the legal relationship between the user and the provider of goods and services from the contract's signing until the contract's end or completion under the contents of the contract. The legal relationship between the user and the provider occurs in signing the contract for the procurement of goods and services until the process of completing the contract is a civil legal relationship, especially a contractual/agreement relationship.



In the process of procuring goods and services, based on the delegation of authority is represented by procurement officials, namely: PA/KPA, Commitment Making Officers (PPK) (Sakidjo, 1990), Procurement Service Unit Working Group/Procurement Officials (PPK/PP), and Committees or Recipients of Work Results (PPPHP), while the providers of goods and services can be individuals or legal entities (private). Procurement officials in carrying out legal relations in the field of agreements act individually/personally. That is, if there is a state loss, then the state will be compensated for the loss personally, as stipulated in Article 18 paragraph 3 of Law no. 1 of 2004 concerning the Treasury, states: "Officials who sign and ratify documents relating to the evidence which are the basis for expenditures at the expense of the APBN/APBD are responsible for the material truth and the consequences arising from the use of the said evidence." Based on Article 55 paragraph (1) of Presidential Regulation No. 54 of 2010, proof of agreement consists of proof of purchase, receipt, Work Order (SPK), an agreement letter.

In the Civil Code (KUH Perdata), book III on Engagement, it is stated that an engagement can be born because of a law or an agreement. The agreement that was born because of the agreement Article 1338 of the Civil Code states that "All agreements made must meet the conditions determined by the law and have legal force as law for those who make them." All agreements bind those involved in making them, have the rights given to them by the agreement, and are obliged to do the things specified in the agreement. An agreement in the procurement of goods and services is an agreement whereby one party performs a job for another party by receiving a specific price. The agreement is the basis for the implementation of activities.

CRIMINAL LAW

The term "crime" derives from the Dutch word straf, often translated as "punishment." Criminal is a more appropriate word than punishment since the law is often a translation of recht. In a limited sense, the word criminal refers to criminal law. Criminal law is defined as suffering inflicted/given on a person by the state as a consequence of a law (sanctions) for their acts that violate a criminal law prohibition. This prohibition is referred to as a crime in criminal law (strafbaar feit).

Criminal law regulates the legal relationship between the provider and the user from the preparation stage until the completion of the contract for the procurement of goods and services (handover). From the preparation stage to the handover of the work/goods, there has been a legal relationship, namely a criminal law relationship.

Criminal law, commonly referred to as criminal law, is because the issues it regulates are about actions against crime and matters related to society. In relation to the procurement of goods and services, the scope of actions/deeds carried out by both users of goods and services and providers is all actions or actions that are against the law. This case means that the actions/deeds in the procurement of goods and services are not in accordance with the laws and regulations, starting from the preparation stage to the completion/termination of the contract. Because criminal law is public law, there is a direct state obligation to protect all the rights and interests of users and providers of goods and services.

The review of criminal law in the procurement process of goods and services is that criminal law is applied if there are criminal violations committed by the parties, both users and providers of goods and services in procuring goods and services. This case follows the "green straf zonder schuld" criminal law principle, which says there is no punishment without guilt. Crimes in government goods and services procurement are prone to deviations occurring at the procurement planning stage, such as indications of budget inflation or mark-ups, directed procurement implementation, unification and fragmentation engineering with the intention of collusion, procurement of goods and services as well as nepotism. In addition to this, other vulnerable points for criminal acts can also occur at the company qualification stage, the procurement evaluation stage, the contract signing stage, and the delivery stage for goods that do not meet the requirements and are of low quality, which can cause state losses. In addition, providers of goods and services are vulnerable points for criminal acts that can occur in acts of document falsification, breaking promises to carry out work (default) so that there are elements of unlawful acts that result in losses for the state.

The basic rules used in implementing the procurement of government goods and services are included in the realm of State Administrative Law, which regulates the implementation of the Government in carrying out its duties and authorities. Regulations regarding sanctions in government goods and services procurement are regulated in Article 118 and Article 124 of Presidential Regulation Number 54 of 2010 and its amendments. The forms of sanctions that can be imposed on parties who commit irregularities in the procurement of government goods/services include:

ADMINISTRATIVE SANCTIONS

The administration of administrative sanctions is carried out by the PPK/ULP Working Group/Procurement Officer on behalf of the provider under the administrative provisions imposed in the procurement regulations. Forms of administrative



sanctions imposed on providers include cancellation of bids or cancellation of winners on the ground. There are irregularities in efforts to influence the ULP Working Group/Procurement Officer to fulfill their wishes contrary to the provisions of the established procedures collude with other goods/services providers. These are to set the bid price outside the procedure and make and submit documents and other information that is not true, the application of fines for late completion of work within the specified period. This sanction can also be applied in the civil context of an agreement/contract, disbursement of guarantees issued for violations committed, and subsequently disbursed into the state/regional treasury. Submit reports to the authorized party to issue permits on deviations made so that it is deemed necessary to revoke the permit holder. The enforcement of administrative sanctions in the form of imposition of financial sanctions on found discrepancies in the use of domestically produced goods/services. Obligation to re-plan at a cost to the planning consultant who was not careful in preparing the plan resulted in state losses. This sanction can also be applied in the civil context of an agreement or contract. Suppose the person who commits the violation is a PPK/ULP Working Group/Procurement Officer with the status of a civil servant. In that case, if it is determined that he has committed a violation, the sanctions stipulated in the staffing rules are given by the party who has the authority to regulate sanctions, such as warnings, postponement of promotions, release from office, and dismissal by employment regulations.

RESEARCH METHODS

The term "research method" comprises two words: method and research (Idham, 2005.) The term method is derived from the Greek *methodos*, which signifies a path or way. The term "method" refers to a scientific activity that involves a methodical approach to comprehending a topic or object of study is necessary to come at scientifically justified solutions and contain their validity. As per the understanding of the approach, the authors employ the following method in this research.

THE DATA SPECIFICATION

The data specification, or the kind of research, is the author's selection of the research format for analyzing the object of research in the area of legal science that he or she is studying. To be more precise, according to Soerjono Soekanto's definition of legal research, it is classified as Normative Legal Research and Sociological or Empirical Legal Research (Idham, 2005). This kind of legal research is referred to as normative legal research or doctrinal legal research. It is also referred to as library research or document study. It is referred to as doctrinal legal study since it

is performed or directed only at written rules or other legal documents. It is sometimes referred to as library research or document study since most of the research is conducted in libraries using secondary sources. The authors of this study rely on secondary data sources, that is, data acquired or compiled by individuals researching existing sources. Secondary data is gathered via library research to establish a theoretical foundation in the form of expert views or publications and gather information in the form of formal provisions and data from existing official documents. Secondary data in the area of law may be classified into the following categories:

Primary legal materials (Idham, 2005) that bind in the form of the basic norms of Pancasila,

- 1) The Republic of Indonesia's Constitution of 1945;
- 2) Presidential Regulation No. 54 of 2010 on Goods and Services Procurement;
- 3) Presidential Regulation of the Republic of Indonesia No. 70 of 2012 relating to the Second Amendment to Presidential Regulation No. 54 of 2010 relating to Government Procurement of Goods and Services.
- 4) Presidential Regulation No. 4 of 2015 Concerning the Fourth Amendment to the Contract for the Procurement of Goods and Services
- 5) Presidential Regulation No. 16 of 2018 Relating to Government Procurement of Goods and Services.

Secondary legal materials are closely related to primary legal materials and can help analyze and understand primary legal materials in the form of dictionaries, literature books, articles, and the internet. In principle, tertiary legal materials or supporting legal materials include materials that guide primary legal materials and secondary legal materials. (Salim, 2014).

LOCATION, POPULATION, AND SAMPLE

The authors performed their study at Tanjung Pinang Police Resort. The study's population is comprised of law enforcement personnel charged with the offense of procuring goods and services (Salim, 2014). Meanwhile, the authors chose the sample in this study using a non-probability selection method known as purposive sampling because this study can be conducted entirely within the workplace, eliminating the need to scour society for data. The phrase "normative legal research" originates in English, specifically "normative legal research." It is referred to in Dutch as normative *juridisch onderzoek* and in German as normative *juridische research*. The research sample was taken for a particular reason. This method is often used when time, effort, and expense constraints prevent collecting a significant number of samples from a remote location.



DATA COLLECTION TECHNIQUES AND DATA COLLECTION TOOLS

The authors collected data in this research using interview methods. The interview was conducted in an open format, with direct question and answer sessions based on a list of questions prepared in advance and developed throughout the interview (Salim, 2014). The authors conducted interviews with various members of the Tanjung Pinang Criminal Investigation Unit. Additionally, the authors of this research included secondary data. All secondary data is gathered via data collecting methods such as document searching in a library. Library research is a data collection technique that utilizes library resources such as journal publications and academic articles. All data acquired and collected is re-examined for completeness and clarity, including the findings of interviews and library materials. Moreover, a data management process is conducted by compiling and classifying the data to facilitate data analysis.

DATA ANALYSIS

The data analysis step of research is critical and crucial. Moreover, data analysis is a step in which sources of issues and solutions to study problems are identified (Soekanto, 2008). There are two distinct approaches to data analysis: qualitative and quantitative. Qualitative analysis involves collecting descriptive data, such as words and images, from interview transcripts, field notes, photographs, videotapes, and personal papers. The purpose of quantitative analysis is to generate codes, numbers, measurements, and operational variables. The data collected during legal research and field studies were evaluated using qualitative data analysis, a scientific method for collecting valid data to discover, demonstrate, and create information that can be utilized to accurately comprehend, solve, and predict an issue (Manab, 2015). To make decisions based on the data gathered in this study, the authors utilized a deductive (generic) to inductive (particular) approach, a technique used to complete a normative system that has been collected and structured via effort collection and inventory.

DISCUSSION & CONCLUSION

Based on the descriptions of legal writing explanations that the author has put forward and based on theories and research sources, it can be concluded as follows:

The legal arrangements for the criminal Act of the procurement of goods and services in the perspective of state financial protection have been implemented well. This case is seen in the provisions contained in the Act, namely: Presidential Regulation Number 54 of 2010 concerning the Procurement of Goods/Services; Presidential Regulation of the

Republic of Indonesia Number 70 of 2012 concerning the Second Amendment to Presidential Regulation Number 54 of 2010 concerning Government Procurement of Goods/Services; Presidential Regulation Number 4 of 2015 concerning the Fourth Amendment on the Procurement of Goods and Services and Presidential Regulation Number 16 of 2018 concerning Government Procurement of Goods/Services.

Implementation of the Crime of Procurement of Goods and Services in the Perspective of State Financial Protection has been carried out under applicable procedures, but in the community, there are still obstacles/obstacles, especially the problem of setting objections to appeals that have not been transparent, honest and fair, and their solutions; Strong intervention influence/power to: appoint easy-to-manage and direct tender organizers; organize and direct auctions to win specific companies; Influencing and intervening in workgroup work.

The factors of constraints or barriers and solutions in Law Enforcement of criminal Acts for goods and services procurement in the Perspective of State Financial Protection, the Factors of Law Implementation and Society.

SUGGESTIONS

Legal Arrangements for the Crime of Procurement of Goods and Services in the Perspective of State Financial Protection, it is hoped that there will be strict legal arrangements and can run properly, as an effort to overcome crime in criminal acts of Procurement of Goods and Services and their enforcement following the provisions of the legislation in force in Indonesia. The implementation of criminal acts of procurement of goods and services in the perspective of state financial protection is expected for law enforcers to be carried out under applicable laws and regulations without discrimination to a party / benefiting certain parties.

Obstacles factors and Solutions for Criminal Acts of Procurement of Goods and Services in the Perspective of State Financial Protection Law Enforcers are expected to be more careful in applying an article of a statute in court so as not to injure justice for the community.

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LINGUISTIC CHARACTERISTICS OF BORROWED MEDICAL TERMINOLOGY

Akbarkhadjaeva Feruza Abduganievna

Independent Researcher, USWLU

ABSTRACT

Regulation of medical terminology is one of the current problems in modern linguistics. The study of medical terms is important for professional communication between specialists, increasing their lexical resources in the training of medical staff, publishing professional scientific literature, developing scientific relations with foreign experts in the field of health, information exchange and creation of industry dictionaries. Latin, as the language of science, had a great influence on the terminology of special scientific fields. The emergence of scientific terms based on Latin continues to this day, indicating the constant interest of linguists in the lexicon of this field. Indeed, in the works of foreign and domestic linguists, much attention is paid to the problem of learning Latin mastery. Indeed, the Latin language serves as a basis for the creation and formation of medical terms.

KEYWORDS: *medical terms, vocabulary, Latin, assimilation, terminology, concept*

The nomenclature of medical specialties deserves special attention, such as epidemiology, sanitation, ecology, pharmaceuticals, epidemiology, sanitation, ecology, pharmaceuticals [17].

Today, the lexicology of the language of science is one of the most actively developing areas of modern linguistics. In addition to general scientific vocabulary, it also relies on industry terms. A term is a word or phrase that serves to clearly define (name) a specific scientific meaning in a specific system of specific concepts.

The origins of modern medicine, stages of development include worldviews from different periods of ancient history. In the National Encyclopedia and Dictionaries of Uzbekistan, the concept of "medicine" is defined as "... a body of knowledge and practical measures in the field of protecting and strengthening human health, prolonging life, preventing and treating diseases" [9]. Synonyms for medicine include terms such as therapy, treatment.

In the reference book "Human Ecology" edited by N.A. Aghajanyan "Medicine" defined as "... a system of scientific knowledge and practical activity, the goals of which are strengthening and maintaining health, prolonging life, treatment and treatment" [1, 96].

Based on the above definitions, we define the concept of medicine in this dissertation as follows: Medicine is a constantly evolving field of science associated with other branches of science,

containing any information about the treatment of various diseases.

It should be noted that the regulation of medical terminology in modern linguistics is one of the most pressing problems. The study of medical terms is important for professional communication of specialists, increasing their lexical base in training medical personnel, publishing professional scientific literature, developing scientific relations with foreign health professionals, exchanging information and creating industry dictionaries.

V.M. Leichik recognizes that a term is "a lexical unit of a certain language, expressing general, concrete or abstract concepts in science and activities of specific and specific areas" [4].

X.D. Palvanova believes that "the term is such that their semantic structure is satisfied with content related to a particular branch of knowledge" [6, 23]. Terms are used to refer to vocabulary related to a specific field. "Ideally, terms are words whose semantic structure is content with content related to a particular branch of knowledge" [6]. Terms are words that perform a separate function, and a separate function that a word performs as a term is the function of naming.

A. Reformatskiy defines the term as follows: a term is a word limited by its individual and special characteristics, it is a single clear word in the fields of science, technology, economics, politics and diplomacy [7].

S. Usmanov gives the following definition: "A term is a word or a stable combination of words



that has a definite meaning even outside a sentence [10, 4].

V.P. As Danilenko points out, the term refers to "a word and phrase that refer to a specific concept based on a definition belonging to a given area" [3, 4].

D.L. Termina Special requirements such as structure, brevity, context independence, absolute and relativity were developed by Lotte [5].

It should be noted that medical terms have a special place in the linguistic layer. It is clear that when this term is used, clarity, adequacy and unambiguity are considered the main characteristics.

In the study, we consider the main "term", which forms terminological concepts and medical terminology, as a nominative word or phrase adopted to denote general concepts. By terminology, we mean a set of terms denoting concepts in any field of activity. Accordingly, "medical terminology" is a collection of terms used in medicine.

Medical terms are special words and phrases used to describe phenomena and processes, their signs and characteristics, such as medical work, pediatrics, clinic, medical prevention, dentistry, surgery, neurology, pharmaceuticals, cardiology, oncology, ophthalmology. Examples of medical terms in Uzbek and Russian: virus, allergy, coma, anemia, cyst, antiseptic, embryo, stress.

Interest in the study of the terminological system of different branches of medicine, subject groups is natural, because the theory and practice of medical science is one of the developing sciences in the whole world. At the same time, the existence of many "interconnected" fields of other sciences related to medicine constantly leads to the addition of hundreds of new concepts to medical terminology.

We believe that interest in the study of medical terms is associated with the following cases:

1) reflect a set of strictly defined professional concepts of medical terminology;

2) Terms, systems of terms, terminological field are universal means of acquiring, storing and expressing specialized knowledge, the analysis of which helps to understand the evolution of medicine, which, in turn, leads to a deeper understanding of the diagnostic meaning of clinical terms, the development of clinical thinking undoubtedly helps in professional activities;

3) regulation of medical terminology is of great importance for mutual understanding of specialists in this field, training of scientific and medical personnel, publication of scientific and informational literature, planning and registration in the field of health care;

4) medicine is constantly developing and connected with other branches of science, therefore, the volume of its terminology is increasing;

5) Health care is one of the most important problems of mankind for centuries.

The data on the quantitative composition of medical terminology vary considerably. According to some reports, the relevant disciplines, including medical vocabulary, contain several hundred thousand words and phrases [15]. However, according to some reports, modern medical terminology studies about 170-200 thousand terms (80-100 thousand names of pharmaceutical and pharmaceutical terms, 10 thousand anatomical names, 20 thousand signs of organ function, 60 thousand names of diseases, methods and surgical interventions). procedure) [16, 108].

It should be noted that medical terms were analyzed by Russian linguists on the basis of different approaches, but in Uzbek linguistics they were not studied in a special monograph on theory and practice.

The classification of medical terms according to the principle of type and category is widely used in microsystems of terms. But, in our opinion, it is not always possible to draw up a classification based on one attribute. The classification of concepts is usually based on a general division, i.e. Changes in the most important feature can affect objects belonging to the same species to different species.

In this regard, T.A. According to Trafimenkova, special difficulties in drawing up schemes for classifying the nomenclature of diseases arise "when the etiology, epidemiology, clinical signs or some other symptoms of the disease are taken as the basis for division" [8, 13]. This negatively affects not only the relevance and accuracy of the composition of medical terms, but also the composition of sound systems, which are not always the most important classification feature of a concept.

Diachronic study of the medical language reveals all the processes occurring at different stages of the medical language. "The reasons for the peculiar changes in the language are called interlingual, and the factors associated with the general development of human society and the history of the people are called extralinguistic" [14, 75].

"Assimilation is an element of another language that moves from one language to another as a result of communication through language, as well as in the process of transition from one language to another" [2, 188]. "Assimilation is the transfer of elements from one language to another or the transfer of elements from one language to another as a result of the interaction of languages. Assimilation can be oral (processing the general phonetic appearance of a word) or written literary (when the word is transliterated)" [2].

Medical terminology is a strictly ordered system. The study of medical dialects is of great



interest both from the point of view of the development of medical terminology and from the point of view of the etymological genesis of terms in relation to the gradual development of the language system and the history of society [11; 13].

In the studied segment of the medical terminology system, the terms obtained from the Uzbek and Russian languages from their own sources and borrowed from other languages are distinguished. The process of assimilating terms from other languages in medical terminology is extremely important in the development of terminology in this area, as well as at all levels of the lexical layer.

One of the most pressing problems of modern linguistics is the identification and description of the terminological potential of various parts of speech. It is known that each unit of the linguistic system is formed as a result of the activation of linguistic creativity. The study of the factors influencing the formation of new units is one of the important tasks of theoretical linguistics, and ensuring the fulfillment of these tasks is one of the tasks of derivatology. Currently, derivatology is the area of functional language studies that studies derivation in a broad sense. Determining the lexical reserve of the field of medicine is one of the most difficult tasks, since due to the vocabulary of the "related" areas bordering medicine, it is impossible to clearly define the boundaries of its expanded activities.

Typically, a new lexicon is formed for three reasons, i.e., it is disseminated in three ways:

1. The emergence of new names.
2. Formation of a new meaning.
3. Learning terms from other languages.

When forming medical terms in languages, each source requires certain terminological techniques. These are: affix, lexical-semantic and syntactic methods. In the field of medicine, each source and each method of forming a term determines the semantic structure of the term being created. This, in turn, allows you to determine the scope of its application.

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TECHNICAL ASPECTS OF THE IMPLEMENTATION OF AN ENERGY-SAVING SYSTEM BASED ON A DIMMER

Raxmatov Odiljon Adxamjon o'g'li

Assistant Electronic and Instrumentations department, Fergana Polytechnic Institute, Fergana, Uzbekistan

ANNOTATION

This article discusses the most important performance characteristics of dimmer-based LED lighting.

KEYWORDS: *dimmer, energy saving, step switching mode.*

INTRODUCTION

In the context of the predicted natural reduction in the reserves of traditional hydrocarbon raw materials and the corresponding increase in prices for traditional energy resources, ensuring efficient energy consumption is an important task of increasing the competitiveness of the economy for all countries. Taking into account that the volume of energy consumed in Uzbekistan by 2030, taking into account population growth, GDP, acceleration of urbanization processes, other things being equal, may increase from 60 million toes. Up to 150 million toes, comprehensive measures to improve energy efficiency are required [1-3].

MATERIALS AND METHODS

The intelligence of the basic level is manifested in the possibility of changing the luminous flux of the luminaires depending on external conditions.

These conditions can be:

- a schedule that determines the decrease in luminous flux and electricity consumption in the evening and at night;
- signals from light or presence sensors, allowing to reduce luminous flux and energy consumption in case of sufficient natural light or the absence of people;

- Commands sent manually when a person wants to reduce the illumination level on their own.

The main benefit of adding such intelligence to a lighting system is obviously energy savings. Moreover, the cost of such a system turns out to be quite low, since its functionality is extremely simple. In the case of group control, the luminous flux can be changed both for a group of luminaires and for all luminaires in the network at once [4-5]. This is not always acceptable.

In the field of street lighting, the simplest and most popular system is to reduce the luminous flux of luminaires by reducing the supply voltage in the line. As an example, we can name the control system "BRIZ" from Svetoservice Telemekhanika, "Kulon" from Sandrax, voltage regulators from Reverberi. Initially, such systems were designed to work with gas-discharge light sources and electromagnetic ballasts, but with the advent of electromagnetic power supplies for semiconductor light sources, it became possible to use LED lamps as part of such control systems. For example: GALAD Victory LED, GALAD Omega LED or GALAD Wave LED [6-7].

In group control systems for street lighting, you can also find light sensors that automatically turn on and off each lamp or line of lamps at dusk (Fig. 2).

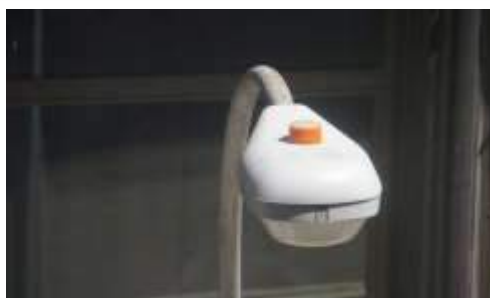


Fig. 1. Illumination Sensor on a Gas-Discharge Luminaire

For address management in street lighting, various solutions are now used: these are all kinds of systems based on wireless digital radio communication protocols, such as ZigBee, which allow you to create a complex multi-cell network and automatically rebuild the message transmission routes over the network. Network in case of any malfunctions; and high frequency PLC power line communication; and a SEAK-type supply voltage amplitude modulation system. There are many options, they all have their pros and cons, and it is difficult to call a particular option the most popular.

Replacing outdated light sources with modern ones is a sure step towards economical lighting costs and obtaining quality lighting. Street lamps based on HPS sodium lamps (arc, sodium, tubular), which until recently had no alternative, are giving way to a new type of street lamps - LED. Indeed, when replacing street lighting devices with HPS lamps with LEDs, energy savings reach 50%, not to mention saving on work on replacing failed lamps - LED lamps last 5 times longer than sodium lamps.

But LED lights provide another great savings opportunity - dimming. Dimming is a decrease in the brightness of the lamp at a time when we do not need bright lighting. Indeed, why force the lamp to run at full power late at night when no one is outside? Indeed, by reducing the brightness, we not only reduce energy consumption, but also increase the lamp life by 1.5 - 2 times! And this is also a significant saving, both in the cost of the lamp itself and in the work on its replacement.

It turns out that you need a device that will control the operation of the lamps - decrease and increase the brightness if necessary. For this, smart street lighting control systems were invented based on adjustable street lights and street light controllers. They allow you to control the light by turning the luminaire on and off, switch it to night mode with reduced power consumption, transmit data on the

status of each luminaire, etc. using PLC technology or wireless data transmission via radio. Channel, we collect statistics on the operation of the lamp and report it in case of emergency situations.

But here, as in any other technical system, there are modules that perform the basic, so-called "useful work", and there are modules that endow the system with certain additional functions, which usually require significant monetary allowances. But is it always necessary? For example, it makes no sense to "overpay" two or three prices for additional service functions for an investor performing work on the modernization of urban street lighting within the framework of an energy service contract - the attractiveness of the project is sharply reduced. But what about small businesses, institutions or urban settlements, in which 10-100 lamps illuminate the adjacent territory or streets? They will never buy a dispatcher outdoor lighting system.

For such cases, there is a solution based on an autonomous street lighting controller. This device does all the work that generates income - switches the luminaires at night to low power consumption mode according to the scheme 100-50-100% or 100-75-50-75-100% of the nominal power. Any automation, including those already installed in lighting control cabinets, can turn on and off 380/220 V street lighting lines - from a conventional photo relay to modern centralized control systems based on GPRS modems [7-9].

DISCUSSION RESULTS

The result is a street lighting control system with so-called "distributed intelligence", which is an order of magnitude more reliable than centralized. A similar approach is used now, for example, in high-class fire alarm systems, where it is the sensor, and not the fire alarm post, that fixes the fact of fire on the spot.

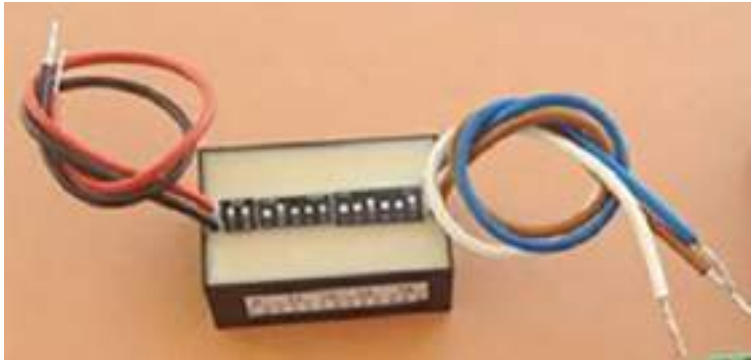


Fig. 2. Dimmer structure.

This is an electronic device (hereinafter referred to as a dimmer), enclosed in a compact sealed composite case with connectors for wires. Dimmer 45 mm x 30 mm x 15 mm. There is a DIP switch on the front panel for adjustment. If you want

to achieve an IP67 degree of protection, after setting the dimmer, a transparent protective neutral silicone sealant must be applied over the DIP switches.

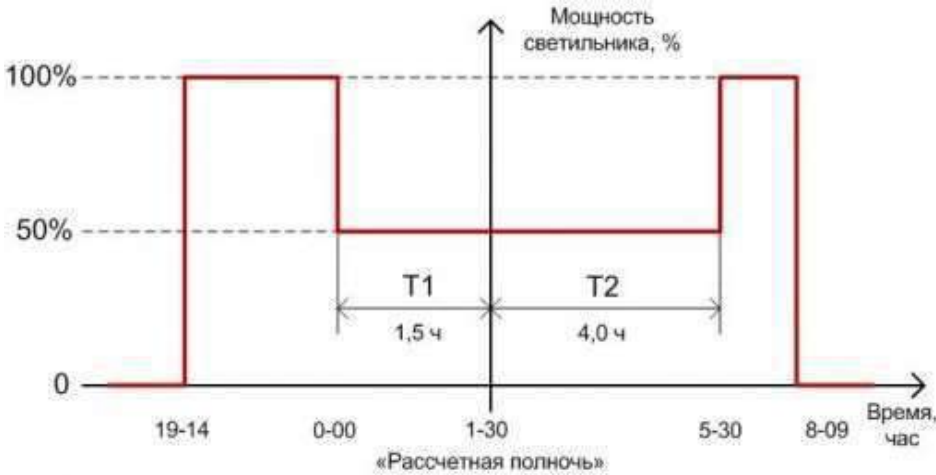


Fig. 3. Three-Stage Switching Mode.

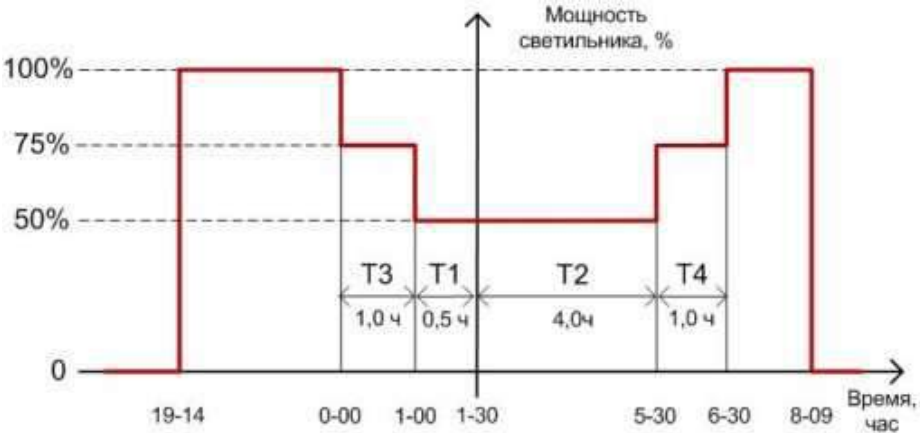


Fig. 4. Five-Step Switching Mode.



CONCLUSION

At the heart of the dimmer is a powerful enough “self-learning” microcontroller, which daily fixes the time of switching on and off the lighting and calculates the so-called “estimated midnight”, from which the start and end times of dimming are then set (see Figures 1 and 2). To program the dimmer, you need to find out the time of switching on and off the lighting and determine the middle of this interval. This will be the “estimated midnight”. Moreover, this figure is correct for any month of the year +/- 10 minutes! Now that we know the time of the estimated midnight, we just need to set in the dimmers with the help of special DIP-switches the power down time before and after this “estimated midnight”. This is called a dimming plan (schedule). You do not need complex and not always reliable methods and systems for transmitting control commands over the power network or radio channel from the dispatcher to the control cabinet and from the control cabinet to the luminaires! Knowing the real operating time of the lighting system for the last three days, the dimmer itself will ensure the timely switching of the luminaire to the night power reduction mode and vice versa. The dimmer functions completely autonomously! At the same time, the dimmer ignores long and short switching intervals, which may occur during the repair of lighting lines or a malfunction of the control cabinet. In the simplest case, you can set a dimming plan in three steps: in the evening hours, the brightness is 100%, at night - 50%, in the morning 100%. Or set a more flexible five-step schedule: 100% - 75% - 50% - 75% - 100%. Knowing the real operating time of the lighting system for the last three days, the dimmer itself will ensure the timely switching of the luminaire to the night power reduction mode and vice versa. The dimmer functions completely autonomously! At the same time, the dimmer ignores long and short switching intervals, which may occur during the repair of lighting lines or a malfunction of the control cabinet. In the simplest case, you can set a dimming plan in three steps: in the evening hours, the brightness is 100%, at night - 50%, in the morning 100%. Or set a more flexible five-step schedule: 100% - 75% - 50% - 75% - 100%. Knowing the real operating time of the lighting system for the last three days, the dimmer itself will ensure the timely switching of the luminaire to the night power reduction mode and vice

versa. The dimmer functions completely autonomously! At the same time, the dimmer ignores long and short switching intervals, which may occur during the repair of lighting lines or a malfunction of the control cabinet. In the simplest case, you can set a dimming plan in three steps: in the evening hours the brightness is 100%, at night - 50%, in the morning 100%. Or set a more flexible five-step schedule: 100% - 75% - 50% - 75% - 100%. At the same time, the dimmer ignores long and short switching intervals, which may occur during the repair of lighting lines or a malfunction of the control cabinet. In the simplest case, you can set a dimming plan in three steps: in the evening hours, the brightness is 100%, at night - 50%, in the morning 100%. Or set a more flexible five-step schedule: 100% - 75% - 50% - 75% - 100%. At the same time, the dimmer ignores long and short switching intervals, which may occur during the repair of lighting lines or a malfunction of the control cabinet. In the simplest case, you can set a dimming plan in three steps: in the evening hours, the brightness is 100%, at night - 50%, in the morning 100%. Or set a more flexible five-step schedule: 100% - 75% - 50% - 75% - 100%.

In five-step mode, the dimmer can save up to 40% energy.

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ON UNUSUAL AMPHIBOLE METASOMATITES TEBINBULAK INTRUSION

Chief Geologist Tashpulatov Sh.T¹, A.U. Turakulov²

¹Geologist Candidate of Geological-mineralogical sciences [V.K. Ponasyuchenko,
(State Unitary Enterprise "Regionalgeologiya")

²Assistant Kodirov S.H. (Tashkent State Transport University)

ABSTRACT

In the Tebinbulak intrusion composed of ultrabasic and basic, in some places with alkaline gradient composition rocks found amphibole rocks probably of metasomatic origin and belonging to thweitazite, characteristic for felitized hybrid rocks. They resulted from the interaction of the main basaltoid magma of the studied intrusion with the intervening Middle Paleozoic acidic sequence. The rocks may also indicate a connection with them of iron-ore, chromite, platinumoid, and rare-metal mineralization.

Tebinbulak gabbro-peridotite massif of the Sultan-Uvais Ridge identified by V.V. Baranov, K.M. Kramskaya, J.S. Visnesky (1978) as Tabinbulak-peridotite-pyroxenite-gabbro complex according to their data summarized all the existing characteristics of former researchers [1] is a unique object to clarify the origin of various, possibly not yet established and described rocks of magmatic and post-magmatic stages of formation of intrusive.

This intrusive massif is located in the halo of the impact of the Urusay deep submeridional fault separating the Sultanuvaia and Sheikhdjaila, structural-formational zones with different dynamics of the sequence of formation of magmatic and post-magmatic rock varieties.

The geological and petrographic features in the intrusive were characterized in order of their ascending sequence.

They also include rocks formed by the interaction of intruded magma with the host sedimentary-volcanogenic metamorphosed strata of the Middle Paleozoic plagioclase-mica hornblende marbleized limestones, skarns containing garnet, rutile, tourmaline, apatite and other ore-forming minerals. Absolute age of the rocks of the intrusion by F.A. Askarov according to A.F. Sviridenko - 298-299 million years G.G. Lihaydov (350-378 million years in the amphiboles); According to V.F. Kazakevich gabbro-diorites are 306-330 million years old. The main types of magmatic formations are peridotites, pyroxenites, tebingitesgornoblendites, gabbroids, gabbro-pegmatites, gabbro-syenites, albite veins.

It is assumed that the appearance of gabbro-syenites is associated with the intrusion of later granitoids Jamansay intrusion, not related to Tebinbulak peridotite, pyroxenite-gabbro complex.

Allowed interaction of granitoid magma of the Jamansai complex, among which are not rare inclusions and block xenoliths of gabbroids Tebinbulak massif. Partial dissolution of fusible mineral components of the main magma contacts leads to increased alkalinity of the granitoid melt with the formation of hybrid gabbro-syenites with magmatic replacement of gabbroids introduced later by granitoid magma.

It was found that peridotites remain among the pyroxinite in a variety of forms, sometimes having with them gradual contacts [2]. Pyroxinite almost always surrounds lenticular bodies of peridotite.

Observed fact that peridotites when in contact directly with the host rocks they undergo intense serpentinization. Quantitative ratios of olivine during wound serpentinization were described by us [3].

In the intrusive pyroxinites occupy significant areas of the massif, they have in different parts different ratios of pyroxenes with corresponding optical different properties, the most pure pyroxenites consisting of pyroxene-augite usually surround the peridotite bodies. The transition from peridotite to pyroxinite is accompanied by formation of significant amounts of hornblende, the amount of which in some places exceeds half of the pyroxinite area. At the same time the formation of two-pyroxene pyroxenes-



verites by optical properties occurs, which is associated with the gradual evolution of the composition of the infiltrating magma in accordance with the Bowen reaction scheme.

Further pyroxenites are replaced by amphibolites, where amphibole as well as pyroxene according to the thermochemical effect contributes to the appearance of monoclinic amphiboles, actinolite, tremolite and hornblende due to the formation of stable hydrogen hydroxide in their composition.

The transition of pyroxenite into mining blendites consisting mainly of amphibole leads to a change in the ratio of petrogenic and ore elements. The transformation of the magmatic system occurs as a result of the activity of alkaline (Na, K) and acidic (Si, Al, Ti) components synchronously with an increase in the chemical activity of two-valent basic elements (Ca, Mg, Fe). All this leads to formation of secondary minerals of the above mentioned elements - epidote, calcite, zoisite, irenite and other minerals accompanied by their hydroxides, oxides (magnetite, hematite, goethite and hydrogoethite, ilmenite and other minerals) in crystalline and colomorphic states.

Identified in the Tebinbulak intrusion rocks such as tibinites, hornblendites and gabbroids with their vein facies (pegmatites, albite veins) are described in sufficient detail [4] and shown their relationships i.e. role in the formation of titanomagnetite mineralization of this intrusion.

Not without interest data left by the late V.K. Panosuchenko on amphibole metasomatic late-magmatic association of amphiboles established during the survey studies on the southern contact of the main rocks of the Tebinbulak intrusion in the alignment of the Urusay fault.

One significant rock consisting of monoclinic amphibole, as described by the author, is given below:

Slip 11-58.

The structure is porphyroblast, the main mass is fine-grained, represented by coalescence of aggregates of zoisite, calcite, quartz, and monoclinic amphibole grains. The rock is complex (volumetric %):

Mon. Amphibole-50
zoisite-30
calcite-10
Quartz-10

The study of the rock under a binocular and optical microscope showed that it is composed of dark green - spots to light green - prisms of

porphyroblasts of monoclinic amphibole (actinolite), between which fine-grained aggregates of zoisite - quartz-carbonate composition (Fig. 2), replacing amphiboles are developed. The fine-grained cohesive aggregate grains are macroscopically, in general, white, grayish-white in color. Quartz is grayish-white, transparent, translucent; zoisite aggregates are grayish-white, translucent. Zoisite aggregates are represented by fine-grained clusters, among which zoisite prism porphyroblasts with longitudinal shading stand out. Quartz and calcite aggregates fill interstitial spaces between minerals of the bonding mass, with calcite forming poikiloblasts with inclusions of monoclinic amphibole and zoisite excretions (Figs. 1, 5).

Porphyroblasts of monoclinic amphibole prisms 1.0x1.2 mm, 1.2x1.4 mm, 2.0x3.0 mm in concatenation or as individuals (Figs. 3, 10). The interference coloration is yellow-red-green, blue-green II order, elongation is positive, the angles of extinction relative to elongation (by extension of cleavage) are up to 20°, there are sections with two cleavage systems (Fig. 3), the angles between the latter are about 56° (Fig. 2,3) in parallel nicols of grayish-greenish hue. monoclinic amphibole is referred to actinolite.

Along the grain boundary and microcracks, zoisite aggregates are developed, predominant in the fine-grained aggregate of the quartz-calcite-zoisite bonding mass in intergrowth with fine-grained actinolite segregations (Fig. 6). The morphology of the grains is closer to tabular, with individual individuals forming larger elongated porphyroblastic prisms with cleavage cracks along the elongation (Figs. 4, 9). The size of zoisite grains is 0.16x0.2 mm, 0.06x0.08 mm to 0.4x0.35 mm in prisms. Interference coloration of zoisite is grayish-brownish, in grains where anomalous ink-blue coloration is shown, zonal color distribution is noted - to the periphery to shades of yellowish, purplish color (Fig. 5-6). Elongation can be + and - (prevails), the angle of extinction in most is close to 0°. According to the elongation in porphyroblasts amphibole clear cleavage cracks.

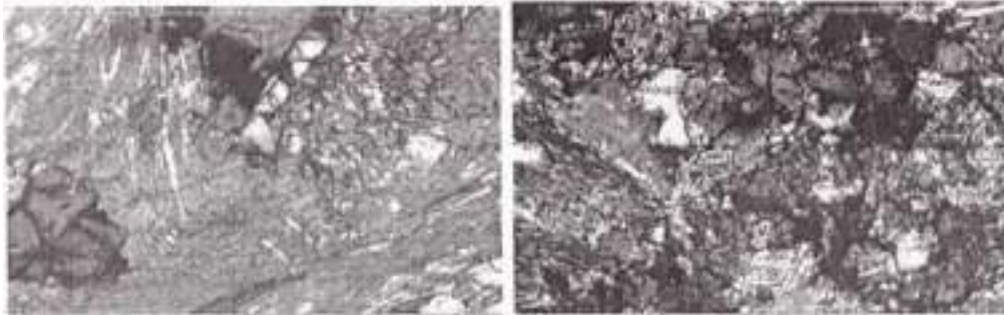
There are sections with transverse cracks in zoisite - fading in such sections is direct relative to elongation and cleavage cracks.

As indicated above, intergranular areas are made by quartz aggregates (Figs. 2, 4), acalcite forms cloak-like silicoblasts with inclusions of earlier minerals, namely monoclinic



sample 11-58, magnification 160x, Nichol+. Figure 1 shows calcite cladding with inclusions of zoisite aggregates (lower left) and monoclinic amphibole;

Figure 2 shows quartz-amphibole-zoisite aggregate. Quartz and calcite are late mineral associations.



Figs. 3-4, sample 11-58, magnification 160x, nicoli + and parallel. In Fig. 1, the aggregate porphyroblasts of monoclinic amphibole (actinolite?), Fig. 4

aggregates of zoisite, calcite amphibole and quartz

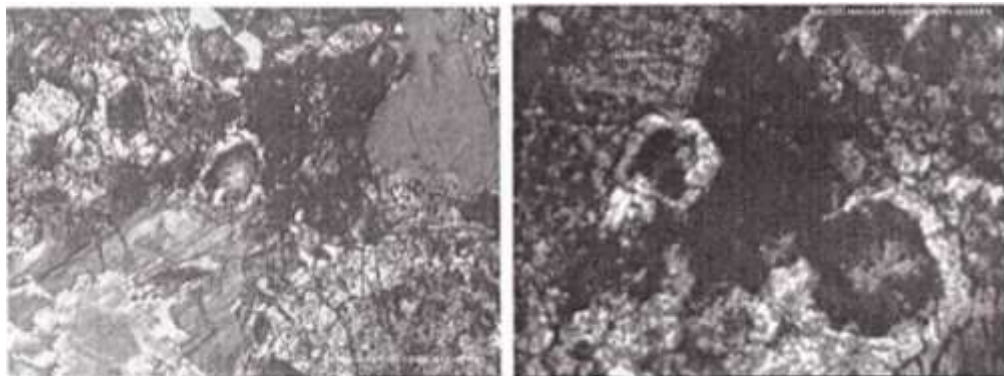


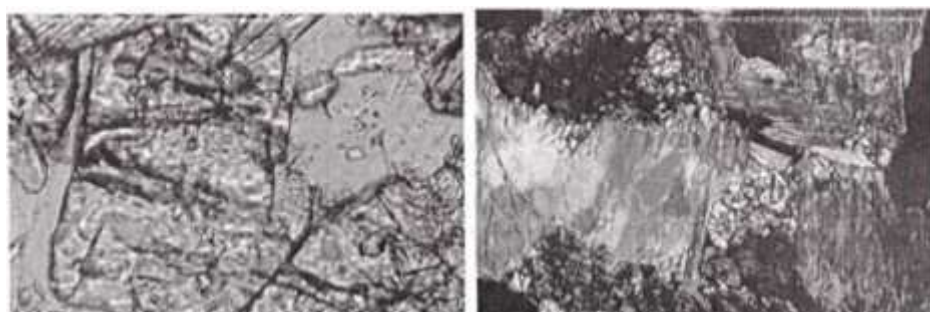
Fig. 5-6, sample 11-58, magnification 160x and 500x, nikoli+. Grains of epidote-zoisite isometric

slices) with anomalous interference coloration, zoning in color distribution was shown.



Fig. 7-8, sample 11-58, magnification 160x, nikoli+. Zoisite-quartz-carboite aggregate developed between

actinolite porphyroblasts.



Figs. 9-10. sample 11-58. magnification 500x and 160x. the nicoli are parallel and +, In Fig.

9-table-prismatic zoisite grains with transverse cleavage cracks, in Fig. 10- prisms-porphroblasts of monoclinic amphibole among zoisite aggregates.

CONCLUSIONS

Thus, from the above data, we can conclude that the Tebinbulak intrusion in the Sultanuvais Ridge with rich mineralization represented by ores of the Kachkanar Ridge type of the Ural Mountains is an object of industrial interest.

Geological and mineralogical features of the material composition have not yet been fully studied. Revealing of peculiarities of mineral composition and their physical and chemical parameters of the ore occurrence will contribute to discovery of new technological types of ores. Revealing the role of late magmatic transformations in ore deposit concentration has a clear theoretical interest.

The description of peculiar amphibole metasomatites left by V.P. Ponasyuchenko, which appeared as a result of twitositization of basic rocks due to the reactionary interaction of the intruded basic magma with the host environment can be evaluated as a search sign to detect the continuation

of iron ore mineralization at the northern end of the intrusion located under the sedimentary cover. This requires further case studies of the intrusion.

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Аннотация

Мусаев А, Ташпулатов Ш, Туракулов А [Понасюченко В.К.]

О необычных амфиболовых метасоматитах Тебинбулакского интрузива.

В Тебинбулакском интрузиве сложенного породами ультраосновного и основного, местами с щелочным уклоном состава встречены амфиболовые породы вероятно метасоматического происхождения и относящегося к твейтазитам, характерным для фелитизированным гибридным породам.

Они возникли в результате взаимодействия основной базальтоидной магмы изученного интрузива с вмещающей толщей среднего палеозоя кислого состава.

Также породы могут указать связь с ними железорудной, хромитовой, платиноидной, редкометаллоидной минерализацией.



THE JUDICIAL ADMINISTRATION OF 'MAURYAS': MILITARY AND GOVERNANCE

Vanshika Shukla

Babasaheb Bhimrao Ambedkar University, Lucknow

ABSTRACT

Although, justice is the first virtue of any empire as truth is of systems of thought. Hence, global heavenliness was generally connected with the liberated ruler, the lord in times past. The certain sublime nature changed into all around related with the freed ruler, the master in a long time ago. The headway of the Hindu contraption towards a machine having a managerial ascertain changed tirelessly alerted the master that a judgment isn't only beside its far given in congruity with the rules of the sastras. The Maurya Empire (322 – 185 B.C.E.), told by strategies for the Mauryan tradition, become a geologically liberal and incredible political and equipped power domain in significant India. Beginning from the realm of Magadha inside the Indo-Gangetic fields of contemporary Bihar, Eastern Uttar Pradesh and Bengal, the area's capital city become at Pataliputra close present day Patna. The paper widely talks about the judiciary, administration and military governance under the Mauryan Emperors and its various functions of the society.

INTRODUCTION

The process of the rise of Magadha Empire which started from Bimbisara was completed under the Maurya emperors. For the first time, a huge Chakravarti kingdom was established in the country, whose capital was Pataliputra. There were two kinds of law courts during the Mauryan period called 'Dharmasthiya' or court of civil law and 'Kantakasodhana' or the court of criminal law. There were various courts in towns of the Mauryan Empire. However, three judges and three commissioners led the cases in these courts. In an atmosphere of political unity and strength, the way for material and cultural progress was paved. Chandragupta was the father of the Mauryan system. He was not only a great conqueror but also an administrator of a high order. He was more diligent in peace time than he was in wartime. Under his leadership, India first had the vision of political centralization and the concept of the Chakravarti emperor was given practical form. Although many elements of the elaborate system that he laid the foundation of were taken from the Iranian and Greek rule, yet it was wonderful and original in substantial parts.

The ultimate goal of this system of governance was to serve the public interest in every situation. Important information about the administration of Chandragupta Maurya comes from Kautilya's Arthashastra and Megasthenes' Indika.

KING

The form of governance of Chandragupta Maurya was monarchical. For the first time in Kautilya's Arthashastra we find a clear definition of the state where he calls it the aggregate of the seven natures. In these, the position of the emperor was 'kutasthaniya' (tat kutasthanio hi swami iti).

All rights and powers were vested in the king. The emperor did not believe in his divine origin, yet he was considered a favourite character of God. He was the supreme authority in military, judicial, legal and executive matters. He was considered the greatest commander of the army, the chief justice of justice, the maker of laws and the enforcer of religion. When there was a conflict between the scriptures and the king's justice (dharmanyaya), only the last was considered as proof.¹

He appointed all the important officials of the empire and thus was the main source of administration. His routine was very strict. Megasthenes tells us that he did not sleep during the day, but used to sit in the Rajya Sabha and listen to the reports of the subjects throughout the day to deliver judgments or other public works.

He could not bear any kind of obstruction in this work. When his body was pressed with ebony tusks or it was time to massage his body, he used to listen to the grievances of the subjects. Even at the

¹ <https://www.preservearticles.com/essay/essay-on-the-judicial-system-of-the-mauryan-rulers-india/13733>



time of shaving and grooming his hair, he had no leave from public work. During this time, he used to listen to the ambassadors.

Kautilya also had a clear opinion in this matter that the king should always be accessible to listen to the grievances of the subjects and should not make the subjects wait for long. He clearly warns that- 'A king whose sight is rare for the subjects, his officers disturb the affairs of the subjects, due to which the king becomes either angry with the subjects or becomes a victim of enemies.'

Therefore, the king should always be engaged in industrial work. This is his fast. The emperor mainly lived in the capital and resided in the huge palace. His court was full of opulence and magnificence. He took special care of his personal safety. He was always surrounded by armed bodyguards. Armed soldiers were deployed on the way out of the palace to protect him. Thus, in Kautilya's system, the emperor had complete control over all areas of political and social life.

He gives the highest position to the emperor (swami) in the seven wings of the state. Its remaining parts- Amatya, Janpad, Durg Kosha, Bal and Mitra- are governed by the emperor and depend on him for their existence (Raja Rajyamiti Prakriti Summary).

AMATYA, MINISTERS AND COUNCIL OF MINISTERS

The emperor used to get help from the Amatyas, ministers and officials in his work. The amatya or secretary was a general authority from whom all the chief functionaries of the state were aware. Greek writers call them 'members and determiners. They used to assist the emperor in public works. Although their number was small, yet they were very influential.' The chief officials of the administration were selected in consultation with them. But they were not all ministers.

He used to appoint a minister from among his amatyas, who used to be beyond all kinds of attractions. These ministers were members of a small sub-committee called "Mantrinas". It had a total of three or four members. The 'Mantrinah' was consulted in the matters of Atyyik (about which immediate decision was to be taken). Probably these included the prince, the prime minister, the commander and the sannidhata (treasurer) etc.

In addition to the 'Mantrinas', there was also a regular Council of Ministers, whose number of members would certainly be quite high, because according to Kautilya, having a large council of ministers is in the king's own interest and this increases his 'mantra power'.

In this context he refers to the council of ministers of Indra having a thousand members, due to which he was called 'Sahastraksha'. The members of the Council of Ministers received an annual salary of

12,000 panas. Its assembly was convened to decide about the necessary works and decisions were taken by majority, but the emperor had the right to ignore the decision of the majority and accept the decision of the minority, if it was in the interest of the nation to do so.

What was the relationship between the Council of Ministers and the Minister, it cannot be determined with certainty? But it seems that the members of the Mantrinah were more superior than the members of the Council of Ministers. The members of the Mantrina received an annual salary of 48,000 panas. The king usually used to do governance work only with the advice of Mantrinah and the Council of Ministers.

In Arthashastra, the Council of Ministers has been described as a statutory requirement. According to him- "Kingdom is possible only with the help of all, only one wheel cannot move. Therefore, the king should appoint secretaries and take advice from them.

Similarly, other instruments are described, there are three types of royalty - direct, indirect and permissible. What is seen with one's own eyes, that which others may tell, that is indirect and it is permissible to estimate the rest by looking at the works done. The king has many tasks which cannot be completed simultaneously. These works are done in different places and the king alone cannot complete them. Therefore, by appointing king ministers, get those works done.

Unfortunately, in economics there was no significant difference between ministers and presidents. That is why Kautilya has not mentioned the departments of the ministers separately. The work of the Council of Ministers has been described as 'to start the work that has started, to complete the work started, to improve the completed work and to get the government orders strictly followed'.

CENTRAL ADMINISTRATION

A very detailed description of central administration is found in Arthashastra. For the convenience of governance, the central administration was divided into several departments. Each department was called a 'tirtha'.

The principal functionaries of 18 pilgrimages have been mentioned in the Arthashastra:

- (i) Ministers and Priests
- (ii) Collector
- (iii) Sannidhata
- (iv) Senapati
- (v) Yuvraj
- (vi) The Presidency
- (vii) Nayak
- (viii) Karmantik,
- (ix) Practical,
- (x) The Council of Ministers,
- (xi) The magistrate,



- (xii) Antpal,
- (xiii) Durgpal,
- (xiv) Citizens,
- (xv) Prashasta,
- (xvi) Dauwarik,
- (xvii) Intrinsic and
- (xviii) Atvik.

Among them were ministers and priests, prime ministers and chief religious officials. During the time of Chandragupta Maurya, both these departments were under Kautilya. The collector was the chief officer of the revenue department, the sannidhata was the chief officer of the state treasury, the commander was the minister of the war department, the crown prince was the successor of the king who helped him in the administrative work during his father's reign, the judge was the judge of the criminal court, the operator of the Nayak army, the principal inspector of the industries of the Karmantik country, the judge of the practical civil court, the head of the council of ministers, the head of the council of ministers, the chief officer mobilizing the materials of the dandapala army, the guard of the frontier fortifications, the fortification manager within the country, the chief officer of the Nagarak city, the principal officer who kept the royal documents safe and the state orders were recorded, the principal officer to look after the royal palaces, the head of the bodyguard army of the inter-caste emperor and the chief officer of the Atavik forest department.²

However, these were high-ranking officers. Apart from the above-mentioned officials, many other office bearers are also mentioned in the Arthashastra. He has been called 'President', who was responsible for some government department. There is a long list of departmental heads and their functions in economics. Probably these presidents have been called 'magistrates' by Greek writers.

The names of some of these are as follows- Panyadhyaksha (head of commerce), Suradhyaksha, Sunadhyaksha (president of slaughterhouse), Ganidhyaksha (inspector of prostitutes), Sitadhyaksha (head of state agriculture department), Akaradhyaksha (head of mines), Warehouse head, Kupyadhyaksha (The head of the forest and its estates), the head of the ordnance, the head of the duty, the head of the thread (head of the spinning-weaving department), the iron head (the head of the metal department), the sign head (the head of the mint house), the gold head, the goshyaksha (the head of the livestock department), Vivitadhyaksha (head of pasture), Mudradhyaksha (head of passport department), Navadhyaksha (head of shipping

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http://www.allahabadhighcourt.in/event/TheIndianJudicialSystem_SSDhavan.html

department), Pattanadhyaksha (head of ports), Sansthadhhyaksha (head of trade routes), Devatadhyaksha (head of religious institutions).³

In the central administration of the Mauryas, the presidents held an important place and they were paid 1000 panas annually. Describing the functions of the magistrates, Megasthenes writes that- 'Some of them were officers of the market, some of the city, some of the army.

Some took care of the rivers and inspected the closed reservoirs, through which the water flowed in the rivers, so that everyone could get equal water. They were also officers of the hunters and they also had the right to reward or punish. They collected taxes and supervised land-related occupations, such as wood-cutting, carpentry, brass and miners. He used to inspect public roads and set up pillars every ten stadia to tell the distance. Those who were the officials of the cities were divided into six councils of five members each.⁴

It is worth mentioning here that departmental heads were also appointed from amongst the Amatyas. In this way, we can say that the members of Amatya Mantri of the first class, Radha, the members of the Amatya Council of Ministers of the second class, were the departmental heads of the third class Amatya.

PROVINCIAL GOVERNANCE OF MAURYAN EMPIRE

The vast empire of Chandragupta Maurya must have been divided into provinces, but we do not know the exact number of provinces of his empire.

From the inscriptions of his grandson Ashoka, we know the names of his following provinces:

(1) Udichya- (Uttarapatha) this included the North-Western region. Its capital was Taxila.

(2) Avantirth - The capital of this region was Ujjayini.

(3) Kaliga- The capital here was Tosli.⁵

(4) Dakshinapatha - This included the region of southern India whose capital was Suvarnagiri. Of S. Iyengars identify this place with modern Kanakagiri located in Raichur district.

(5) Oriental or Prasi - This means eastern India and its capital was Pataliputra.

Out of the above-mentioned provinces, Uttarapatha, Avantiratha and Oriental were certainly existing even

³ <https://byjus.com/free-ias-prep/ncert-notes-mauryan-administration/>

⁴ S. N. Sen (1999). Ancient Indian History and Civilization. New Age International. ISBN 978-81-224-1198-0.

⁵ <https://gkchronicle.com/ancient-history/Administration-of-Mauryan-empire.php>



during the time of Chandragupta Maurya. It is not impossible that the Dakshinapatha was also a part of his empire. The governors of these provinces were usually 'kumars' related to the royal family.

But sometimes other qualified persons were also made governors. Chandragupta appointed Pushyagupta Vaishya as the governor of Kathiawar. According to the Arthashastra, the Governor used to get an annual salary of 12,000 panas. He used to run the administration of the provinces with the help of many amatyas and presidents. He also had his own council of ministers.

CIRCLE, DISTRICT AND MUNICIPAL ADMINISTRATION

In each province there were several divisions, whose affection we can establish from the modern commissionerates. The officer named 'Pradeshta' mentioned in the Arthashastra was the head of the board. In the writings of Ashoka, it has been called 'territorial'.

He used to supervise the work of the heads of various departments under his board and was responsible to the collector. The division was divided into districts which were called 'Ahaar' or 'Vishaya'. Below the district was the 'local' which had 800 villages. There were two 'Dronmukhs' under the local. Each had four hundred grams.

There were 20 collections under the Kharvatika and Kharvatik below the Dronamukh. There were two hundred grams in each Kharvatik and Dum grams in each collection. The heads of these institutions, exercising judicial, executive and revenue related powers, used to perform their work with the help of officials called yuktas.⁶

The head officer of the collection was called 'Gopa'. Megasthenes calls the officers of the district Agronomoi. He refers to different classes of employees who ran the administration of different departments of the district. There were different officials to manage land and irrigation, agriculture, buns, wood industry, metallurgical workshops, mines and roads etc.

In the Maurya era, the administration of major cities was carried out by municipalities. For city administration there was an assembly whose head was called 'Nagarak' or 'Puramukh'. Megasthenes has mentioned six committees of the city council of Pataliputra with five members each.

The first committee supervised various types of industrial arts and looked after the interests of artisans and artists. The second committee used to make arrangements for food, accommodation and

⁶ Upinder Singh (2008). A History of Ancient and Early Medieval India: From the Stone Age to the 12th Century. Pearson. ISBN 978-81-317-1677-9.

medical treatment of foreign travelers. It used to lead them if they went out of the country and also arranged for funeral rites when they died. It was also the work of this committee to keep a close watch on the conduct and activities of foreigners for the security of the state.⁷

The third committee kept the account of the census. The fourth committee looked after the trade and commerce of the city. Its function was to control the items of sale and the measure and weight. No person was allowed to sell two articles until he paid double the tax.

There was the fifth industrial committee which used to prevent adulteration in the goods sold in the markets and get the traders punished for the crime of adulteration. There was a separate arrangement for selling both new and old items. There was the sixth tax committee whose work was to collect tax on the goods of purchase and sale. It was 1/10 of the sale price. Those who evaded this tax were given the death penalty.⁸

Megasthenia calls the office bearers of the city as Est nomoi. Although we do not know about the governance of other cities, on the basis of this description, it can be inferred that there must have been committees in other major cities like Pataliputra. It is clear from this that the cities had autonomous rule in the Mauryan Period.⁹

VILLAGE ADMINISTRATION

The village was the smallest unit of administration. The head of the village was 'Gramani'. He was elected by the villagers and was not a salaried employee. Arthashastra refers to 'Village Council'. In this, there were prominent people of the village who used to help the villager in the village administration. The state generally did not interfere in the governance of the villages.¹⁰

The villager had the right to manage the land of the village and to arrange for the means of irrigation. The council of village elders also did the work of justice. It could decide petty disputes in villages and impose fines etc. The villager used to collect land tax from the farmers and deposit it in the state treasury.

⁷ Thapar, Romila (2013), The Past Before Us, Harvard University Press, ISBN 978-0-674-72651-2

⁸ H. C. Raychaudhuri; B. N. Mukherjee (1996). Political History of Ancient India: From the Accession of Parikshit to the Extinction of the Gupta Dynasty. Oxford University Press.

⁹ ibid

¹⁰

https://rfppl.co.in/subscription/upload_pdf/Tulishree%20Pradhan_7021.pdf



The work of the office of the Gram Sabha was done by an employee named 'Gopa'. He kept the details of the houses and residents of the village properly and also kept an account of the taxes received from them. Some information is obtained from the writings of Sohgaura (Gorakhpur) and Mahasthan (located in Bogra district of Bengal Desh) about Chandragupta Maurya-era village government. In these, there is a mention of the warehouses built for the safety of the public.¹¹

There is also a discussion of building a warehouse in economics. From this it seems that tax collection was also done in the form of food grains and these were stored in treasuries. This food was distributed among the rural people in times of divine objections like famine, drought.

JUDICIARY IN MAURYAN EMPIRE

In the monocratic rule of the Mauryas, the emperor was the supreme judge. It was the last court to hear all kinds of cases. Apart from this, there were many courts throughout the empire.

Courts were mainly of two types

1. Religious and
2. Particulate-purification.¹²

The difference between these courts is not very clear, yet we can generally call them civil and criminal courts. In these two, three judges used to sit together and do the work of justice. Special types of courts were organized to try the cases of foreigners. The punishments were very harsh. Common crimes carried monetary fines.

Kautilya mentions three types of punishments:

- (1) Prior courage punishment- It ranged from 48 to 96 panas.
- (2) Medium courage punishment- It ranged from 200 to 500 panas.
- (3) Uttam Sahas Danda- It ranged from 500 to 1000 panas.

Apart from this, the punishment of imprisonment, whipping, mutilation and death penalty was given. Death penalty was given for organ-mutilation of artisans. Similar punishment was also given to those who evaded taxes and scammers of state money. The Arthashastra shows that officers named Yukta often used to kidnap money. It is mentioned at one place that – 'Just as no one can see the fish moving in the water while drinking water, similarly no one can know the yuktas appointed to the economic post by kidnapping money.'

The Brahmin rebels were put to death by immersing them in water. In the crime in which no

proof was found, divine tests were taken by water, fire and poison etc. Megasthenes' description shows that crimes were not often committed due to the harshness of punishments. People left their homes unsafe and did not enter into any written agreements.¹³

Apart from some people took refuge in the law. Once when he went to Chandragupta's military camp, he came to know that- 'The value of the things stolen in the whole army was less than 200 drakams.' Arthashastra shows that the amatya who is 'dharmopadhashuddha' means pure by religious temptations. Those with character were perfect, they were made judges. The judges had to decide the punishment only after studying religion, behavior, character, and governance.

Of these four, Rajashasan (King) was considered the best. Punishment was also made for the employees of the courts. Judges and court employees were punished for making false statements, imprisoning an innocent person, acquitting the offender.

ACUMEN

The success of Chandragupta Maurya's elaborate administration was to some extent based on efficient acumen or intelligence. This department was placed under an amatya called 'Mahamatyapasarpa'. Detectives are called 'enigmatic men' in Arthashastra.

Those persons were appointed in this department, whose purity and integrity of character were tested in every respect, dubhabhih sudhamatyavarga gudhapurushanutpadayat. The network of spies was spread throughout the empire. He used to travel in various guises and inform the emperor about the day-to-day affairs.¹⁴

He supervised the activities of all types of officers. The Arthashastra states that- 'Spies should be appointed to keep an eye on the activities of all kinds of kings and to keep an eye on the eighteen pilgrimages of enemies, friends, medium and indifferent.'

Greek writers have called him observers and observers. According to Strabo, highly qualified and reliable persons were appointed to both these positions. Arthashastra mentions two types of spies-institution: i.e., living in one place and communication; those who travel everywhere. Apart from men, clever women also used to spy. Arthashastra shows that prostitutes were also appointed to the posts of spies.

If a spy gave false information, he was punished and removed from office. Apart from

¹¹ <https://www.jstor.org/stable/pdf/41688888.pdf>

¹² <http://www.panchmuramahavidyalaya.org/fckeditor/userfiles/file/Administration%20System%20of%20the%20Mauryan%20empire.pdf>

¹³ <https://www.legalserviceindia.com/legal/article-4877-the-legal-system-in-india-an-analysis.html>

¹⁴ *ibid*



intelligence, there was also police for the maintenance of peace and prevention of crimes, which in Arthashastra has been called 'Rakshin'.¹⁵

MANAGEMENT OF MAURYAN ARMY

Chandragupta Maurya had a very large army. There were 6 lakh footmen, 30 thousand cavalymen, 9 thousand elephants and possibly 800 chariots. The number of soldiers was the largest in the society after the cultivators. Soldiers were paid in cash and special attention was paid to their discipline and training. The job of the soldiers was only to fight. In times of peace, they lived a life of joy and comfort. All the materials related to war were provided by the state. Awards were also given to him in honor of the victory.

The salaries of the soldiers were so high that they could take care of themselves and their dependents with great ease. The description of Megasthenes shows that this army was managed by six committees. Each committee had five members. Their work was different. The first committee used to arrange for the water army. The second committee used to arrange material, transport and logistics, the third looked after the foot soldiers, the fourth arranged the cavalry's army, the fifth arranged the gaj-army and the sixth committee arranged the chariot army.

The commander was the head of the war department. The post of commander was very important and he was a member of 'mantrina'. He was given an annual salary of 48000 panas. The four parts of the army (horse, gaj, chariot, foot) had different heads, who worked under the command of the commander. He used to get an annual salary of 8000 panas. The officer operating the army in the battlefield was called 'Nayak'. After the commander, the post of Nayak was the most important in the military organization, which received 12000 pan annual salary.¹⁶

The Mauryas also had a powerful navy. In the Arthashastra, there is a mention of an officer named 'Navadhyaksha' who was also the head of the merchant ships in addition to the warships. The frontier territories were protected by strong fortifications. An officer named 'Antapal' was the head of the forts.¹⁷

CHARITY ACTS

Although Chandragupta Maurya was an autocratic ruler, he took many measures with the aim of making the material life of his subjects happy and convenient. Huge highways were built for the

convenience of traffic. For the convenience of irrigation in western India, Pushyagupta Vaish, the governor of Chandragupta's Surashtra province, had built a history-famous lake named Sudarshan. It was constructed near Girnar (Junagarh) by constructing artificial dams over the water bodies of Raivatak and Urjayat mountains. Kautilya stresses on the need to build dams for irrigation. It seems that inspired by this the lake was formed.¹⁸

Irrigation was done by taking out canals from it. During the time of Ashoka, his governor Tushasya had made roads for the drainage of water from the lake. This increased its usefulness. We can call this lake an excellent example of Mauryan engineering art. Apart from this, many types of dispensaries and schools were also established by the state for the health and education of the citizens. It is clear from the above description that the governance system of Chandragupta Maurya was philanthropic. His concept of government was paternalistic.¹⁹

Despite being autocratic himself, in practice he used to rule according to religion, ethos and justice. He had a constant concern for the public interest. Extensive measures were taken to protect the public from the exploitation of the merchants and to protect the slaves from the tyranny of the masters. The state used to bear the responsibility of maintaining orphans, widows, dead soldiers and employees. Prajahit was given the highest place in the detailed administration outlined by his guru and Prime Minister Kautilya, and this is the biggest feature of this government.²⁰

The governance philosophy of Chandragupta Maurya is clearly manifested from these lines of Arthashastra- "In the happiness of the people lies the happiness of the king, in the interest of the subjects lies his interest. It is not in the interest of the king to love himself, but in doing what is for the people, it is in the interest of the king.

Thus, Chandragupta's system of governance realized the concept of a welfare state. But all was not well in the administration of Chandragupta. There were some flaws in it which we cannot ignore. In this elaborate administrative system, the central control was so strong that individual liberty was completely crushed and the common citizen was forced to live under strict control. The institutions representing public opinion were almost insignificant.²¹

A network of spies was spread throughout the empire, who interfered not only in public but also private affairs of the individual and kept the emperor

¹⁵ ibid

¹⁶ <https://indianexpress.in/mauryan-administration-system-mauryan-government/>

¹⁷ ibid

¹⁸ <https://courses.lumenlearning.com/boundless-worldhistory/chapter/the-maurya-empire/>

¹⁹ https://www.worldhistory.org/Mauryan_Empire/

²⁰ https://www.worldhistory.org/Mauryan_Empire/2

²¹ <https://blog.ipleaders.in/independence-judiciary-modern-administrative-state-india/>



informed of all kinds of activities. The powers of the bureaucracy were wide and the scope for oppression of the subjects remained equal. The punishments were very harsh. Death penalty and inhuman torture were common.

Therefore, the criticism of some modern scholars is quite strong that – ‘Chandragupta sacrificed civil liberties on the altar of security and converted the empire into a police state.’ It was a good thing that Ashoka later administered these administrations. Recognized the shortcomings and rectified them suitably to make it more philanthropic and friendly to the interests of the subjects.

EMPEROR AND COUNCIL OF MINISTERS

Ashoka was the sole ruler of a vast empire. He assumed the title of ‘Devanam Piya’. According to Shastri, its purpose was to get the support of the priests. In contrast, according to Romila Thapar that the aim of this title was to express the divine power of the king and to distance himself from the mediation of the priests.

It is noteworthy that there is no mention of ‘purohit’ in the writings of Ashoka. It was an important post in the time of Chandragupta. This also indicates that the interference of the priest in political matters was over. In principle, despite being autocratic and omnipotent, Ashoka was a Prajavatsal emperor. He considered his subjects to be sons and thus his conception of kingship was paternalistic. He gave utmost importance to the interests of the people.

Expressing this sentiment, Ashoka in his sixth inscription says- ‘The welfare of all is my duty, it is my opinion. There is no other work than the welfare of all. Whatever valor I do, it is so that I can be free from the debt of ghosts. May I make them happy in this world and they can attain heaven in another world.’²² It is clear from these lines how lofty his ideals of kingship were. It is noteworthy that here Ashoka talks about the debt of the people towards the king, which can be repaid only by doing good to the subjects. This idea was completely new and original.

The word ‘Parisha’ is also mentioned in Ashoka’s inscription. She was the ‘Council of Ministers’ of Economics. Buddhist literature shows that Ashoka’s prime minister (Agramatya) was Radhagupta. The council also had the power to supervise and give directions to the high officials.

The third and sixth inscriptions throw light on the work of the Council of Ministers. The third article shows that the orders of the council were duly written, which were communicated to the public by the local officials. The sixth inscription shows that

²² <https://lawbhoomi.com/comparison-between-indian-judiciary-system-and-the-kautilyan-chanakyas-legal-system/>

the Council of Ministers used to consider the fundamental orders of the emperor and the decisions taken by the departmental heads on important matters.

He had the right to make recommendations to the emperor for amending or even changing them. Ashoka says that if such a situation arises or if there is a difference of opinion in the Council of Ministers on any matter, then its information should be sent to him immediately. Sending the royal orders to the emperor for reconsideration or change proves that the Council of Ministers was not only an advisory body, but it had real and detailed powers.

The Divyavadana also shows that Ashoka had to stop the wastage towards the Buddhist Sangha due to the opposition of the Council of Ministers. Thus, the position of the ‘parisha’ was like that of the modern secretariat which acted as an administrative body between the emperor and the Mahamatras.²³

PROVINCIAL GOVERNMENT

For the convenience of administration, Ashoka’s vast empire was divided into many provinces.

The names of five provinces are found in his inscription:

- (1) Uttarapath (capital-Takshashila),
- (2) Avantiratta (Ujjayini),
- (3) Kalinga (Tosali),
- (4) Dakshinapatha (Suvarnagiri) and
- (5) Oriental or eastern region (Pataliputra).²⁴

Apart from these, there must have been more provinces. In the provinces of political importance, only the persons belonging to the royal family were appointed as governors. He was called ‘Kumar’ and ‘Aryaputra’. Such Kumars were appointed in Taxila, Suvarnagiri, Kalinga and Ujjayini.

The Divyavadana reveals that Ashoka’s son Kunala was the governor of Taxila. It is known from the Mahavansh that he appointed his younger brother Tishya as the ‘Uparaja’, after which Ashoka’s son Mahendra was appointed to this post when he became a monk. Probably the post of ‘Uparaja’ was like that of Prime Minister.

In other provinces, other high-ranking governors were appointed. Appointments to these posts were made without any discrimination of caste or religion. The Girnar inscription of Rudradaman I shows that the Yavanajatiya Tushasp was the governor of Ashoka in the Kathiawar province.²⁵

It seems that in the appointment of governors in small provinces, only local people were given priority. There was also a council of ministers to

²³ <http://www.barcouncilofindia.org/about/about-the-legal-profession/legal-education-in-the-united-kingdom/>

²⁴ *ibid*

²⁵ <http://davcae.net.in/File/CIs-VI%2013-18.pdf>



assist the governor in the provincial administration. Its powers were more than that of the Central Council of Ministers. It controlled the autocracy of the provincial rulers. Sometimes it took direct orders from the emperor and carried them out, as indicated by the story of making Kunala blind in the Ashokavadan.

Under the provinces there were the rulers of the districts, who were not appointed by the emperor but by the governor of the respective province himself. This is proved by the Siddhapur small inscription. In this, Ashoka, not giving direct orders to the Mahamatras of Isla, sends orders only through Kumar of the southern province.

ADMINISTRATIVE OFFICER

The names of some important officials of his administration are found in the writings of Ashoka.

The names of three functionaries are found in the third inscription of Ashoka:

- (i) Yuktas,
- (ii) Rajuk and
- (iii) Regional.

Their details are as follows²⁶

(i) Yuktas

These were the officers of the district who collected and kept accounts of revenue and also managed the property of the emperor. They also had the right to spend money in that work which could increase the revenue. In Arthashastra also there is mention of office bearers named 'Yukt' or 'Yuktas'.

There the description of 'Yukt' is found as an accountant. It is clear that these were subordinate employees whose one function was to record the decisions of the superior officers and also to present them before the Council of Ministers. He used to go on tour with Rajuk and Pradeshik.

(ii) Rajuk

Buller has told that this officer is related to the 'Rajjugahak' (rope catcher) of the Jataka texts. Such officials used to keep a rope with them to measure the land. He was like the 'settlement officer' of today.

The post of Rajuk was important. They were appointed over several lakhs of people. In his fourth column article, Ashoka, while expressing full faith in the Rajuks, says- 'Just as the parents are convinced by snakes in the hands of a qualified mother-in-law, in the same way I have appointed Rajuks for the happiness of the rural people.'

Rajuk used to work only for the revenue department but later he was also given judicial powers. They could also give relaxation in punishments. Rajuk used to take care of the comfort

and convenience of the people under him and also used to give them gifts.

Thus, the position of 'Rajuk' was like that of a District Magistrate in modern governance, who has to look after both the work of revenue and justice. It is worth mentioning here that Strabo refers to a class of magistrates in the Mauryan administration who looked after the rivers, measured the land and had the power to reward and punish.

Clearly this is a sign from the kings only. According to Romila Thapar, the Rajuks were the backbone of the rural administration. He had to decide all the disputes related to land and agriculture. He had to decide the tax-assessment, exemption of taxes, water-related disputes, pasture-related disputes between farmers and pastoralists and disputes of rural artisans. For this reason, Ashoka had increased his rights.²⁷

(iii) Territorial

He was the head officer of the Mandal. His work was like that of the present-day 'Divisional-Commissioner'. He also had to do justice. It seems that it was the regional office bearer named 'Pradeshta' mentioned in the Arthashastra, who had to look after the work of the heads of various departments.

It is clear from this that the regional was the senior of the above two officers. The regional and rajuks used to get help from subordinate officers called yuktas in their work. In his third inscription, Ashoka says that he has ordered Yukta, Rajuka and Pradeshika to go on a five-year tour. This type of tour is called 'Anussayana'.

In these, along with administrative work, he also used to do the work of propagation of religion so that the transcendental life of the people could be happy. Ashoka himself used to tour his vast empire and personally tried to relieve the sufferings of his subjects.²⁸

The Names of Three More Office Bearers are found in the Twelfth Inscription

- (a) Dhammahamatra,
- (b) Lady President Mahamatra and
- (c) Brajbumik Mahamatra.

Their introduction is as follows:

(a) Dhammahamatra

These were Ashoka's own works which he appointed in the thirteenth year of his consecration. His work was to maintain harmony between different sects, to receive donations from the king and his family members and to make proper arrangements

²⁶ <https://www.clearias.com/officers-mauryan-empire/>

²⁷ *ibid*

²⁸ *ibid*



for it. He also used to see that unnecessary punishment or torture was not given to any person.²⁹

(b) **Styadhyaksha Mahamatra**

It was an officer looking after the moral conduct of women. It seems that one of his functions was also to spread religion among the emperor's entourage and women.

(c) **Brajbhumi Mahamatra**

He was the officer to look after the gopas residing in the transit-bhoomi (Braj). In economics, animals like cow, buffalo, goat, sheep, horse, camel etc. have been called Braj. It is possible that Brajbhumi also takes care of the protection of animals and their growth.³⁰

In the inscriptions of Ashoka, there is also a mention of office bearers named 'Nagalviyohalak' and 'Antamahamatra'. The town-practical was the judge of the city. Bhandarkar is of the view that this officer has been mentioned in the Arthashastra by the name of 'Pour Vyavak'.

In the writings of Ashoka, he has been called 'Mahamatra'. It seems that his post used to be equivalent to that of Kumar. Romila Thapar is of the view that the towns were practical judicial officers who worked under the citizen. In special circumstances the citizen could interfere in their work.

The 'Antamahamatra' were the officials who used to go to the border regions for preaching religion. Some scholars describe Antamahatra as the high authority of the frontier province or its protector, but in the writings of Ashoka, the word 'Anta' has been used only for the ruler of the frontier province or its subjects.

These officials worked among the marginalized people and the semi-civilized tribes and were responsible for conveying the policy of the emperor to those people. It seems that Mahamatra and Purusha were a broad noun, which was understood by all the high officials.³¹

CONCLUSION

Finally, the paper explains the judicial administration and military governance of Mauryas and though, it merely talks the central and provincial laws of the society. It also indicates that there is no law without society. In this period mainly two courts (Dharmasthiya and Kantakasodhana) were prevalent.

Perhaps, their ultimate desire was to maintain the law and order in their provinces. During this there the severe punishments were given for serious crimes. However, the cases were decided according to the traditions and customs of Hindu caste under the panchayat system and the 'King' was the highest court of appeal. Thus, there were civil and criminal courts at local level. However, his system of administration was of an extremely brought together sort having an incredible administration at the middle, yet much was left for the nearby self-Government. The administration gave due consideration for commerce, business, industry, farming and public government assistance exercises. Obviously, the need of a 'King' was intrigued yet it was similarly accentuated that they needed to govern as indicated by the Dharma and for the foundation of the Dharma which was helpful for the most elevated and great.

²⁹ https://www.brainkart.com/article/The-Mauryan-State-and-Polity_33563/

³⁰ <https://www.vedantu.com/question-answer/describe-governance-in-the-mauryan-empire-class-7-social-science-cbse-5fdb877c7dd0d60c2b402c0c>

³¹ *ibid*



USE OF RHETORIC IN MULTI-LEVEL MARKETING

¹ Abel T. Gumaran, ² Danna Karyl Jane C. Talde

¹Faculty, Adiong Memorial College Foundation, Inc., Wao, Lanao del Sur, Philippines

²Faculty, Department of Languages and Literature, Central Mindanao University, Maramag, Bukidnon, Philippines

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ABSTRACT

This study aimed to analyze how identification worked as a key to persuasion among agents in Frontrow Enterprise, an MLM company. Specifically, it sought to find the prevalent source of identification, identification strategy used by the Frontrow agents in their speeches, and their level of persuasion. This study employed descriptive-qualitative design which utilized critical analysis using the Theory of Identification and Consubstantiality. Results show that the highest frequency source of identification found in the speeches is the idealistic identification and the highest frequency identification strategy is the common ground. Based on the findings of the study, it can be concluded that persuasion is manifested using shared interest, attitude, perceptions, values, beliefs, and ideas through establishing common grounds with the audience.

KEYWORDS: Multi-level Marketing, Identification and Consubstantiality, Level of Persuasion, Agents' Speeches, Sources of Identification, Identification Strategies

INTRODUCTION

The use of strategies and techniques among Multi-level Marketing (MLM) companies in convincing individuals to join their network has been an intriguing topic among several researchers (Stocker, 2019; Rashid *et al.*, 2016; Yunus *et al.*, 2016; Legara *et al.* among others). In the Philippines, there are over a hundred active MLM companies which even operate internationally whose products are mostly related to beauty and health (Andallo, 2016) – one of these is the *Frontrow Enterprise*. And, this company has been growing rapidly, such that it continues to recruit additional marketers or agents to become part of their network.

However, only few studies are conducted related to MLM, and these researches only focused on analyzing factors that affect individuals to buy possibilities and become one of them (Ramiscal, 2006; Rashid, 2016), while others only investigated on the downsides and exploitative nature of these MLM companies (Stocker, 2019). Moreover, these studies only explored the texts gathered from the websites of

the top MLM companies operating internationally. This is why this study was conducted in order to examine how these MLM agents do their convincing power through the use of rhetoric which could be reasons why many people tend to join and become distributors.

In this regard, it is just noteworthy to have examined how these companies reached the level of success through establishing the identification process and identification strategies of the agents as a way of persuasion.

Moreover, this study is peculiar from the past studies as it made use of Burke's theory in the world of MLM in general and in *Frontrow Enterprise* in particular through the New Rhetoric approach. Furthermore, this study may not just give insights related to language and public speaking studies but also in the field of marketing.

OBJECTIVES OF THE STUDY

Generally, this study aimed to analyze the identification, strategies, and level of persuasion of *Frontrow Enterprise* agents.



Specifically, this study aimed to (1) identify the prevalent source of identification found in the speeches of the main speakers and the testimonies in each session, (2) ascertain the prevalent identification strategy found in the speeches of the main speaker and the testimonies in each session, and (3) determine the level of persuasion of the MLM agents.

METHODOLOGY

This is a qualitative-quantitative study as it dealt with the examination of the sources of identification and the use of strategies, as well as the measurement of the level of persuasion among the *Frontrow Enterprise* agents. This company was chosen due to its prominence among MLM companies especially in the Philippines.

Data collection was conducted during the five orientation sessions of the company having different speakers of various assigned topics towards interested individuals. A total of 11 speeches were collected with an average duration of 20 minutes. After having the consent form approved, speeches were recorded, transcribed, and translated to English since some of the utterances are expressed in vernacular. Then, the instrument proposed by Burke (1969) was used to determine the prevalent source of identification and strategy used by the agents. Afterwards, three inter-raters were asked to check the analysis of the speeches.

Also, a survey was conducted among the audience to identify the level of persuasion which was done through an evaluation form adopted from the study of Lee (2013), which was then analyzed and interpreted through the help of a statistician. Descriptive statistics such as frequency and percentage counting were utilized, as well as the use of *Mann-Whitney U Test* to answer the problems of the study.

RESULTS AND DISCUSSION

A. Prevalent Source of Identification

Table 1 reveals that the *idealistic* type of identification is the most frequent as to the source of identification. This means that the agents tried to convince their audience to join their company through getting on the same ideas, perception, experiences, values, interests, and attitudes with their audience. Because they wanted to build common reality perceptions with their audience especially on the financial aspect of life – how it would change their lives and the lives of their loved ones – they tend to establish common grounds especially on how they want their audience to see themselves based on how the agents structured and filled their speeches with words that would truly captivate the decision of the listening individuals.

Table 1. Sources of Identification

Sources of Identification	<i>f</i>	%
Materialistic	25	10
Idealistic	205	83
Formal	14	6
Identification through Mystification	1	1
TOTAL	245	100

The common ideas expressed are either pointing to the positive or negative side of life. These ideas include taking good care of the body, maintaining good health, unique principles that would help a person succeed financially, possible steps to achieve success in life, as well as unhelpful mindsets of people, weak decisions in life, and reasons for people's unproductivity.

This outcome is in congruence with the study of Rashid *et al.* (2016) whose findings show that the speaker's choice of words construct the identification process manifested in the speeches. In this way, the ideas about products, quality, world, and health

function are the common rhetorical content used by MLM companies to persuade people. Moreover, Cesario and Higgins (2008), in their study, emphasized that when the source of the message is consistent in feeding motivations to the recipient, there will be high probability that the recipient will experience a regulatory fit and eventually, feel right.

B. Prevalent Identification Strategy

Another concern of the study is the prevalent identification strategy used by the agents along with the dominant source of identification.



Table 2. Identification Strategies

Identification Strategies	f	%
Common Ground	168	68
Antithesis	2	1
Unconscious	76	31
TOTAL	245	100

Table 2 presents that the most frequent identification strategy is the common ground. This means that the speakers of MLM *Frontrow Enterprise* stood and built connections with their audience through identifying common goals and situations. In other words, these speakers were putting themselves in the situation of the audience in order to agree with them, in this way, solving strong disagreement between people. For instance, they pointed out common challenges faced by individuals who have the same goal of wanting a better life.

This result correlates with the study of Attwater (2012) which also reveals that the use of

common ground strategy was frequent when doing the persuasion because this strategy attempts to bridge the gap across divisions of traditions and ideologies. Also, speakers in this manner could enter into the goals or situations of their listeners (Weigand, 2008) which is a big influence for persuasion to have a positive effect.

C. Level of Persuasion of the Speakers

The final objective of the study is to examine the level of persuasion brought by the speakers of the said MLM Company.

Table 3. Overall Level of Persuasion

Overall Satisfactory Rating	Level	Interpretation
Strongly Agree	High	Persuasive

Table 3 presents that the overall level of persuasion of the speakers is *high*, which is interpreted as *persuasive*. With this, the prevalent source of identification and strategy used by the speakers helped them to become persuasive towards their audience which entailed that the audience were satisfied with the speeches and that they had come to a point of deciding to join the company.

This result is supported by the theory of Burke (1969) which states that whenever someone is trying to persuade another, identification is formed. Also, Quigley (2013) found the same results in that speakers identify with their audience through providing a rich source of content creating commonalities with which persuasion may truly be evident. Various strategies are used just to persuade the audience, and thus, persuasion is built upon the kind of source and strategy being used.

Also, the identification with the audience helped the speakers achieve their primary goal of getting positive decisions from their audience to join and avail of their products and services. The same idea is true to the results presented by Igartua (2010) which indicated that the kind of identification used by the speakers helped achieve their purpose of making the audience believe and be convinced.

CONCLUSION

Based on the findings of the study, it can be concluded that the use of *idealistic identification* in persuasive speeches along with the use of *common ground* strategy can make persuasion to occur and thus, making it effective and productive.

RECOMMENDATIONS

From the results and conclusion drawn in the study, it is recommended that other theories be applied in tracing the specific ways of persuasion in speeches. Also, it is suggested that another data collection method through interviews may also be done to verify the data gathered through a written questionnaire. Further, the level of persuasion may also be given a premium through the inclusion of figures indicating the number of participants who had eventually joined the *MLM Company* after the orientation.

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LINGUA-CULTURAL ASPECTS OF PROVERBS AND PHRASEOLOGICAL UNITS IN INTERCULTURAL COMMUNICATION

Khushmurodova Shakhnoza Shaymonkulovna

PhD. Senior Teacher, Samarkand State University

ABSTRACT

Communicative phraseological units include proverbs and sayings which are often used in the process of intercultural communication. Proverbs and sayings are the product of folk's art. Many phraseological units are widely used in different text types to make them more expressive and emotional. In most cases phraseological units express the attitude of the human to what is happening in the world.

KEY WORDS. *Communicative phraseological units, intercultural communication, proverb, cultural interpretation, expressive, emotional, phraseological dictionaries, cultural phenomena*

It should be mentioned that communication process deals with usage of phraseological units and proverbs which are rather difficult to be translated from one language into another. Communicative phraseological units include proverbs and sayings which are often used in the process of intercultural communication. Proverbs and sayings are the product of folk's art. They are known to all people of the world. Each nation or ethnic group has its own proverbs and sayings which reflect customs and traditions, way of life and mentality of people. Proverbs and sayings convey people's wisdom from generation to generation. As we know, proverbs teach people to do or not to do something. Most of them have the structure of rhyme and repetitions of the same sounds which make the proverbs emotionally expressive:

English proverb says: *Birds of feather flock together.*

Uzbek proverb: *Qozonga yaqin yursang – qorasi yuqar, yomonga yaqin yursang – balosi yuqar.*

Both proverbs are semantically similar: they denote the same characteristics of people who are usually in close relations with each other (friends, partners, etc.) and these relations influence on their reputation and general characteristics. But structurally and lexically these proverbs are totally different. The first example is expressed by a simple sentence, the second is compound sentence. Such kinds of proverbs are also often used in communication and translator should know how to transfer their meaning from one language into

another, because they can't be translated word-for-word.

Proverbs, in comparison with phrases, are expressed by sentences. Sentences can be both simple and complex. We should point that according to A.V. Kunin, most of communicative phraseological units are simple sentences [A.V. Kunin, 2005, p. 439]. But M.I. Rasulova considers that proverbs are mostly expressed by complex sentences [M.I. Rasulova, 2005, p. 226]. But during our investigation there were found many proverbs of both types of sentences: simple and complex:

Simple English proverb: *It's never late to learn.*

Simple Uzbek proverb: *Olma olma darahiting tagida tushadi.*

Complex English proverb: *If you want to be a friend, never borrow, never lend.*

Complex Uzbek sentence: *Toqqa chiqmasang do'lana qayda, jafo chekmasang jonona qayda.*

In the works devoted to the cultural interpretation of phraseological units the scholars investigate etymology of phraseological units, evolution of their meanings, linguocultural, pragmatic, gender aspects of phraseological units, stereotypes and symbols, etalons and archetypes, culture codes and cultural values fixed in the semantics of phraseological units.

Cultural connotations of different phraseological groups were investigated by V.N. Teliya, M.L. Kovshova and other linguists.



The cultural connotations of phraseological units are defined by cultural values of a certain nation that are specific for it. Cultural connotation emerges as a result of interpretation of associative and image basis of phraseological units in its relation to national-cultural stereotypes, i.e. interpretation of denotative, connotative, and image components. According to V.N. Teliya the relation between the image contained in the form of the linguistic sign and the content of a cultural model forms cultural connotation [V.N. Teliya, 1996, p. 214].

Most of the works done in this framework of this problem focus on phraseological units with a particular component (anthroponyms, toponyms, colour, flora, zoomorphism) or phraseological units arranged within one thematic group (family, friendship, relationships, nature). It should be mentioned that most of the researches devoted to national-cultural specifics are done from comparative perspective on the base of two or more languages. In all researches the scholars try to identify the national-cultural specifics of phraseological units, analyze cultural factors that influence on formation of phraseological units, reveal causes of national-cultural specifics, identify culturally-marked components in their structure: realia, symbols, images.

As is known, many phraseological units are widely used in different text types to make them more expressive and emotional. Besides, phraseological units often serve as cultural signs that manifest national culture. For example, in the title of newspaper article "Pandora Opens More Classical Boxes" (The Washington Post, 24.07.2013) the phraseological unit "Pandora's box" is used. This idiom denoting "a source of many unforeseen troubles" activates background knowledge about ancient Greek myth. According to the myth Zeus gave a box to Pandora with the instructions not to open it, but she gave in to her curiosity and opened it. As a result all the miseries, evils and diseases flew out to afflict mankind, except Hope. Another example is from the fictional text: "Members of Parliament and ladies of fashion. Like himself and Fleur... now and then... going for each other like Kilkenny cats (Galsworsy, Forsyte Saga). The phraseological unit "Kilkenny cats" contains cultural component expressed by realia "Kilkenny". The city of Kilkenny is known for its constant fight with another city Irishtown that caused their mutual devastation. In this context the phraseological unit is used to describe the relationship between the Parliament members who though hating each other, pretend to be friendly.

There are special types of phraseological dictionaries with cultural comments which are helpful to learn cultural aspect of phraseological units. On the basis of new and unique linguocultural

researches under the supervision of V.N. Teliya there has been created the dictionary «Phraseological dictionary of the Russian language, 1st edition – 2006; 4th edition – 2009). The dictionary describes phraseological units as signs of "language of culture", as cultural symbols, etalons, stereotypes, and etc. This dictionary has no analogues in the world lexicography, as it comprises about 1500 phraseological units that are provided with the description of situation in which they can be used, stylistic markers and functional peculiarities, illustrating citations from all types of written discourse, including the Internet sources.

The most influential dictionaries of idioms are often republished: Collins A Book of English Idioms (1998, 2002, 2006, 2011); Oxford Dictionary of Idioms (1998, 2004, 2009); Cambridge Idioms Dictionary (2006); Longman Idioms Dictionary (2006). The microstructure of entries contains a phraseological unit and its variants, stylistic markers, descriptive definition, the sphere of usage, grammatical markers, illustrative examples, synonyms and antonyms, etymology, historical markers.

According to V.N. Teliya [V.N. Teliya, 1996, p. 18] phraseological units are defined as linguistic representations of cultural phenomena due to their ability to reflect the national mentality and the system of cultural values of the people who speak this language. For instance, idioms with anthroponyms, toponyms, etc. can be considered to be the most vivid representations of culture: *All at Lloyd's* (the highest quality); *Davy Jones' locker* (the bottom of the sea; the mythical resting place of drowned mariners); *the Black Belt* (southern regions of the United States of America, where Afro-Americans live); *Jim Crow* (the nickname of the black which is given to them by white racists); *John Barleycorn* (the personification of the beer or other alcohol drinks); *John Bull* (nickname of the English people); *Jack Ketch* (cruel man, executioner, executor, hangman, butcher); *Tom, Dick and Harry* (undifferentiated ordinary people); *Tom Tiddler's ground* (a place where money or profit is readily made); *Philadelphia lawyer* (a well educated person, shrewd and sometimes astute); *put on the Ritz* (to be dressed very modern and accurately. (Ritz is the name of expensive Hotel in Paris, London and New York); *Harley Street* (doctors, medical world because Harley Street is a street in London in which lots of popular doctors live).

So, in most cases phraseological units express the attitude of the human to what is happening in the world. In other words, phraseology is regarded as a set of valuable data about culture and the mentality of the people, their customs and traditions, myths, rituals, habits, behaviour, etc. So, phraseological units constitute an important culture



relevant and evaluative layer of the conceptual world picture.

The main tasks of investigations in the framework of linguocultural phraseology are as follows:

- to work out a typology of cultural connotations in phraseological units;
- to reveal the conceptual content of the phraseological units;
- to explore the symbolic semantics of phraseology;
- to investigate the role of phraseology in the world picture representation;
- to elaborate principles and methods of cultural interpretation of phraseological units.

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DETERMINATION OF FLOW SPEED THROUGH THE SOLAR HEAT COLLECTOR

Madina Alisher kizi Muydinova¹, Hamidakhon Botirjon kizi Kasimjanova²
Shuhrat Shavkatbek ugli Jabborov³

¹Andizhan State University, PhD Senior Lecturer, Republic of Uzbekistan

²Andizhan State University, Faculty of Physics and Mathematics, 3rd year student of Physics,
Republic of Uzbekistan

³Faculty of Physics and Mathematics, 2nd year student of Physics

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ABSTRACT

This article shows how to determine the speed at which current flows through a solar heat collector. The results were studied with the help of modern laboratory equipment and the results were analyzed graphically. It also covers the origins of solar heat collectors, their current importance, types of solar collectors, and solar water heating systems.

KEY WORDS: solar collector, solar heating system, electricity, lighting module, pump module, Power module, real efficiency, flow rate.

INTRODUCTION

Nowadays, more and more attention is paid to the use of energy-saving sources. Demand for solar panels is also growing. As the population grew and the amount of energy needed to meet its needs increased dramatically. However, as a result of the sharp decline in these energy sources, an energy crisis is emerging on the entire planet. This is due to a sharp decline in non-renewable energy sources - dry and liquid fuels. As a result, the planet is experiencing dramatic changes in temperature and an increase in various natural disasters. In addition, the use of these energy sources is causing an environmental problem - acute air pollution. Mankind is in need of renewable energy sources to prevent global energy and environmental problems. These are running water, wind, nuclear, solar and biogas energy.

The first model of a solar collector was created in the late 18th century by the Swiss scientist Horatio Saussure, a device consisting of a glass and wooden box with a layer of heat inside. Such devices began to be used in practice in the late 19th century to heat hot water in Southern California. The production of a simple solar collector in the form of a

water tank covered with black paint, covered with a closed glass on a sunny side and mounted in a wooden box, began. In such collectors the water was not hot in the evening, it was necessary to wait the next day for it to heat up. By the end of the 1940s, the solar collector manufacturing industry was at its peak in the southern states of California and Florida. Shortly afterwards, the use of electricity and gas, the cost of hot water production fell, and the production of solar collectors stopped. The second phase of production of solar collectors dates back to the 1970s. As the global oil crisis erupted and energy prices soared, many countries around the world, including the United States, Japan, Australia, and the Mediterranean, began to use solar panels. Production in quantities has been set up. By 2000, rising energy prices had ushered in a new phase in the use and production of solar collectors. By the beginning of 2010, 150GW of solar collectors had been installed all over the planet, excluding solar pools and air collectors.

Solar collectors with a capacity of more than 30 GW are installed every year, and today the total capacity of solar collectors in the world produces more than 250 GW of thermal energy, and



this figure continues to grow. In particular, in China in 2012, the total area of solar collectors was 145 million m², and the total amount of heat energy they provide exceeded 100GW. In comparison, the combined capacity of all nuclear power plants in Russia is four times higher. The use of a solar collector is very cost-effective, and during its service life, the solar collector produces such an amount of energy that the cost of building the device is several times higher [1]. Solar collectors have become the most efficient device for using solar energy. If photovoltaic panels use 14-18% of the solar energy they receive, this efficiency in the solar collector will reach 70-80% [2]. Mankind is in need of renewable energy sources to prevent the global energy and environmental problems mentioned above. The main purpose of this work is to study the speed at which the current flows through the solar heat collector as a function of modern laboratory equipment. This includes a general analysis of how to use solar energy, the structure and principles of operation of solar collectors, water heating systems using solar energy.

METHODS

Solar heating systems are systems that use solar energy as a heat source. Solar heating systems differ from other low-temperature heating systems by the presence of a special element-solar collector, which serves to receive solar energy and convert it into heat energy. A solar collector is a device designed to store solar thermal energy (in solar installations) using light and infrared radiation. Unlike solar panels, which generate electricity, a solar collector is powered by a heat-insulating material.

Depending on the temperature, we consider the following types of solar collectors:

1. Low temperature collectors - such collectors produce a temperature not exceeding 50°C. They are

used in situations where high temperatures are not required, such as heating pool water.

2. Medium temperature collectors - this can heat water to 50 - 80°C. Most often, such a collector is a flat glass plate, which is a device consisting of a liquid as a heat carrier.

3. High-temperature collectors are often in the form of a parabola, often operating in relatively larger systems, which collect electricity and distribute it throughout the city electricity [3]. The solar collector absorbs solar radiation and heats itself and the filled water. The efficiency of a solar collector $\bar{\epsilon}$ is measured by the ratio of the heat energy absorbed by the water to the radiant energy DE entering the collector DQ

$$m = \Delta Q / \Delta E$$

Here the radiant energy is determined from:

$$\Delta E = \Delta tP$$

In this case, R is the radiation power. When the collector is warmer than the environment, it releases heat into the environment through radiation, convection, and heat conduction. Due to these losses, the efficiency of the collector is reduced. The laminar or turbulent motion of a collector depends on the temperature, velocity, and kinematic viscosity of this magnitude, which is determined by the Reynolds number [4]. In the experiment, the forced circulation of the liquid is carried out by means of a pump. Since the heat energy absorbed by the system (collector, pipes, and tank) is mainly concentrated in water, the temperature of the solar collector cannot be too high. In experiments, the solar collector is used with or without thermal insulation. In this case, the temperature characteristics of the water in the tank are measured.

Necessary tools and equipment; digital measuring device with main base, Lighting module, pump module, expansion tank, Solar collector, liquid thermometer, PowerModule, temperature sensor



Figure-1. Experimental experimental device.



The work was performed in the following order:

1. As shown in the figure, the solar collector and pump module are placed in the expansion tank in the main block and the left pump connection is connected to the modules with closed hoses for proper connection of the collector bottom and bottom outlet (expansion tank connected). The upper connection of the expansion tank is then connected to the upper connection of the collector to close the water circuit.
2. Now pour water into the water expansion tank and connect the PowerModule to the pump (9V). Now this water leads to corrosion of the contacts. If necessary, the measuring cup was filled with water

- until a stable water chain was established with about 200 ml of liquid. You need to turn carefully to remove the remaining air pockets from the collector.
3. To begin the test, a liquid thermometer was placed in the expansion vessel and a ready-made clock was set to measure the time. Now the pump is set to 5V.
4. The lamp was placed in front of the collector (distance 15 cm) and turned on. When the collector was heated, the temperature in the expansion vessel was measured and the values corresponding to the table were entered. The water chain was emptied and refilled with cold water.
5. The experiment was repeated with a voltage of 9V. These values were recorded in the table.

RESULTS AND DISCUSSIONS

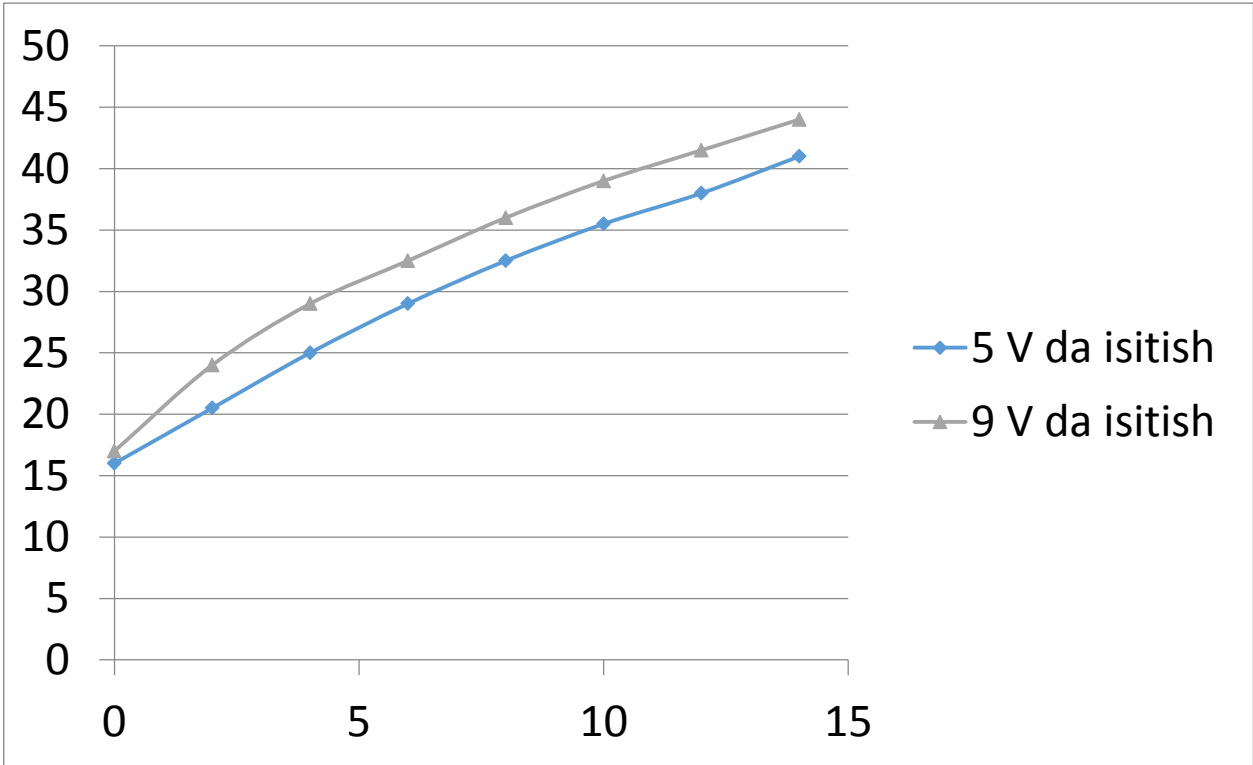
Table-1. Heating at 5 V.

Time	0	2	4	6	8	10	12	14
Temp	16	20,5	25	29	32,5	35,5	38,5	41

Table-2. Heating at 9 V.

Time	0	2	4	6	8	10	12	14
Temp	17	24	29	32,5	36	39	41,5	44

Graph-1. Graph of the change in water flow in the collector depending on the flow rate.



It is clear from the graph that the temperature rises linearly with time. As the flow rate increases, the

temperature rises faster, because in this case the water receives more light energy. Thus, in this case,



the share of heat energy obtained from light energy is greater. At low flow rates, the temperature at the direct output of the solar collector is high. Due to the high temperature of the solar collector, more heat energy is lost.

The amount of heat energy absorbed by water can be calculated by the following formula using Q , mass m and specific heat capacity coefficient:

$$\Delta Q / t = c \cdot m \cdot \Delta T / t$$

The rest of the absorbed radiant energy is used to heat the system.

Example of small value speed:

$$4.2 \text{ kJ} / \text{kgK} \cdot 1 \text{ kg} \cdot 1.52 \text{ K} / \text{min} = 100 \text{ J} / \text{s} = 100 \text{ W}$$

The efficiency of the system is in the order of 0.1 at low flow rates and in the order of 0.12 at high flow rates.

The actual efficiency (the ratio of the energy used to the incident radiant energy) is usually much larger than these quantities. Up to 80% efficiency is achieved in a real solar collector system.

CONCLUSION

When we heat water using a solar collector, it is important to deliver the water inside the collector to the consumer faster and without a large temperature difference. Therefore, a pump is used to accelerate the movement of water. The higher the pump, the faster the water circulates and the faster the water reaches the consumer. As the flow rate in a solar collector increases, the temperature rises faster, because in this case the water receives more light energy. Thus, in this case, the share of heat energy obtained from light energy is greater. In our experiment, we can see from the results that a pump operating at 9 V delivers hot water better than a pump operating at 5 V. At different time intervals, it can be seen from the graph that the temperature difference of the water supplied by the pumps is different. However, care must be taken not to increase the voltage, as the water in the collector may not have time to rise to a sufficient temperature.

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DISCERNMENT OF CYBERBULLYING APPROACH

Shruti Aggarwal¹, Himanshu Sharma², Sanjana Mann³, Mehul Gupta⁴

¹Jagan Institute of Management Studies, Rohini, Delhi, India

²Jagan Institute of Management Studies, Rohini, Delhi, India

³Jagan Institute of Management Studies, Rohini, Delhi, India

⁴Jagan Institute of Management Studies, Rohini, Delhi, India

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ABSTRACT

People in the 21st century are being raised in an Internet enabled world where social media has become an integral part of people's daily routine, with communication just a click away. As per the latest survey, the number of individuals using social media is over 39.6 million worldwide, with the average user having 8.7 accounts on various networking sites. Social media provides an opportunity to connect with people and share data in the form of posts, text etc, with this package of pros and yet various individuals are trying to misuse it by spreading hatred towards a group, individuals, a topic or an activity. Due to which cyberbullying has come into play, affecting the psychological state of the person. Where prevention is much needed, for which many researchers have come together and established many such technologies and programs for automatically detecting the events of cyber bullying on social media and preventing them by analysing the pattern of the posted comments or images. Thus the purpose of this research is to track and monitor the threats using supervised machine learning and mining.

1. INTRODUCTION

Over the past decade or two, social media has proliferated at an unprecedented rate which has changed the way people communicate among themselves by sharing text, images and videos leaving behind the traditional ways.

In the year 2020, a major boom was noticed on the social networking sites as the world was hit by a pandemic namely COVID-19, which bounded people to stay inside and away from physical interaction, so social media became a very easier means to interact with their famed over distances and also entertain them whilst all the negativity.

As the facts suggests, in 2020, around 3.97 billion people were using social media in the world, and this was an increase of 10.9% from 3.48 billion in 2019.

Around 2021, there are 37.8 million social networking sites users which equates to around of population. Also on an average 2.5 hours is spent daily per person on social media platforms which also led to negative impacts on ones life. One of the major concerns of over usage of social media is cyberbullying.

Cyberbullying can be defined as an aggressive or intentionally carried out harassment by a group or an individual through digital means repeatedly against a sufferer who is unable to defend themselves. This type of bullying includes threats, abusive or sexual remarks, rumours and hate speech.

According to the survey, 40% of teenagers and over 37% of adults across 32 countries were involved in the act of cyber bullying. also combing the facts, it was analysed that out of 38% that were involved, 19% were identified as the "aim," 21% as a "witness" and 1% each as both "supporter" and "bully."

After understanding the mindset and their bullying behaviour, it was discovered that some felt social pressure to act and some of them even regret their actions.

Victim of cyber bullying are more likely to experience depression, anxiety, suicidal ideation and even sometimes leads to suicide.

In order to overcome this situation of cyber bullying many techniques are being used. This paper would help us understand about the techniques and algorithms like SVM (Support Vector Machine) and TF-IDF (Term Frequency – Inverse Document



Frequency) which are used by various social media sites in particular Twitter.

Support Vector Machine is one of the most popular techniques used for classification and regression in Machine Learning. Term Frequency – Inverse Document Frequency is a term used in retrieval of information. It determines the frequency of words in a document and its inverse document frequency.

This paper consists of Literature Review which enlightens us about various machine learning algorithms, comparison with the best ML classifiers followed by their result and discussions.

2. LITERATURE REVIEW

This paper includes research work done by various researchers on techniques like SVM and TF-IDF and comparing them with others.

Yin et al.[1], used a supervised learning approach to detect harassment from three different social websites. Dataset along with the content features, sentiment features and contextual features of documents were used from Kongregate, Slashdot and Myspace. They used a lib SVM with the linear kernel as a classification tool. It was concluded that TFIDF was better than n-gram and Foul Language with higher weighing performance.

M. Dadvar and F.de Jong[2]., analyzed the gender approach within the cyber bullying detection problem, applied to the social network MySpace. Authors investigated the content of the posts written by the users but regardless of user's profile information. They used an SVM model to train a specific gender text classifier. The dataset consists of about 381,000 posts. The results obtained by the gender based approach improved the baseline by 39% in precision, 6% in recall, and 15% in F-measure

Chavan and Shylaja [3] also produced a score signifying other users the probability that a statement could be offensive. The accuracy was increased by 4% using a dataset from Kaggle10 by integrating the outcomes of Support Vector Machine classifiers.

Cynthia Van HeeID, Gilles Jacobs, Chris Emmery, Bart Desmet, Els Lefever, Ben Verhoeven, Guy De Pauw, Walter Daelemans, Ve

roniqueHoste [4] has built a classifier which detects indication of cyberbullying on social media platform discriminating roles in the annotation scheme which includes victim, bully, bystanders-defendant and bystanders-assistant using Linear support vector machine as a classifier. They demonstrated the method which can be used for languages easily. The experiments were performed in English and Dutch datasets.

Bhatia et. al. in 2013, 2015 [19]proposed secure group communication techniques using steganography for communication of secret messages on the internet. To maintain the security of secret messages Bhatia in 2014 proposed image steganography method using spread spectrum approach. In the proposed technique author uses the properties of orthogonal image planes and secret message is modulated using pixels of one image plane of cover image. The modulated message is then replaced by the pixels of another image plane.

Bhatia, 2017 [20] proposed a secret message hiding technique, in this technique author divided the image into RGB planes. Each plane is further sectioned into 8*8 pixel blocks and secret message characters are embedded in pixels corresponding to position of 8-Rooks in 8*8 chessboard.

Bhatia in 2019 [21], proposed a message hiding technique, in this technique author used solutions of Knight tour and 8-Queen's problem in an 8*8 chessboard. The proposed technique applied solutions of moving knight tour and of placing 8-Queen's in non-attacking manner in 8*8 chessboard to select pixels for embedding secret message bits.

M. A. Al-garadi, M. R. Hussain, N. Khan, G. Murtaza, H. F. Nweke, I. Ali, G. Mujtaba, H. Chiroma, H. A.Khattak, and A. Gani, [5], different algorithms were compared for detection of cyberbullying on social media which consists of SVM(Support Vector Machine), NB(naïve Bayes),RF(random forest),DT(decision tree),KNN(k nearest neighbour),LR(logistic regression),ARM(association-rule mining),RB(rule based algorithm).Out of all this the SVM algorithm is the best based on factors like accuracy, precision recall .The limitation of this paper is the unexplored deep learning architecture.

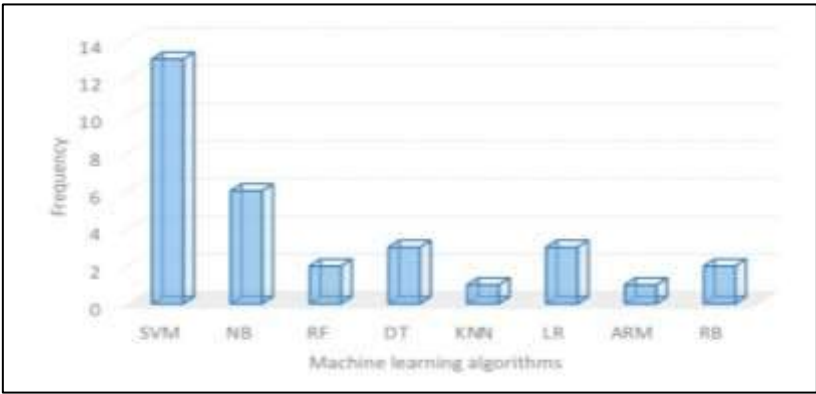


Figure 1[5]. Different Machine learning algorithms applied in cyber bullying detection.

3. METHODOLOGY

In this study, selection of a social networking site played a vital role for detecting cyber bullying. Thus after a regress research Twitter was selected as it generates loads of data everyday. As dataset was publicly available, a large amount of cyberbullying was noticed.

This dataset consists of multilingual unstructured content which was needed to be cleaned for higher accuracy rate. All data for this research was collected from Internet Archive [6], is an American open source digital library of websites, software app/games, videos, millions of books etc.

3.1. Research

During this research, a problem was identified which was to find a suitable technological approach that will help in detection of cyber bullying on social media. The approach explored, is a system capable of detecting and reporting incidents of cyberbullying on social media platforms.

The research was carried out using two machine learning approaches:

3.1.1. SVM: Support Vector Machine is one the most convenient and efficient classification algorithms. It uses supervised learning approach for classification. In SVM, 70% of its data is used for training purpose and rest 30% for testing [9]. Its main goal is to separate the hyperplane in such a way that it maximizes the margin of training data.

Where, fit() is used to fit the model into the train set and predict() is used to perform prediction on the test [9]. In simpler terms, the classifier is first trained with labelled data before it can be used to classify the data to evaluate accuracy, recall, precision. Once the classifier is trained with the labelled data, the input data is given to this classifier to separate it into positive and negative instances of bullying.

For instance [7]:

- “This girl is moron, I don’t like it” which only includes a profanity so is considered not cyberbullying.
- “You are a bitch” in these case this is a cyberbullying and profanity along with a second person(you) or third person (She, He, They, It) or a person’s name.

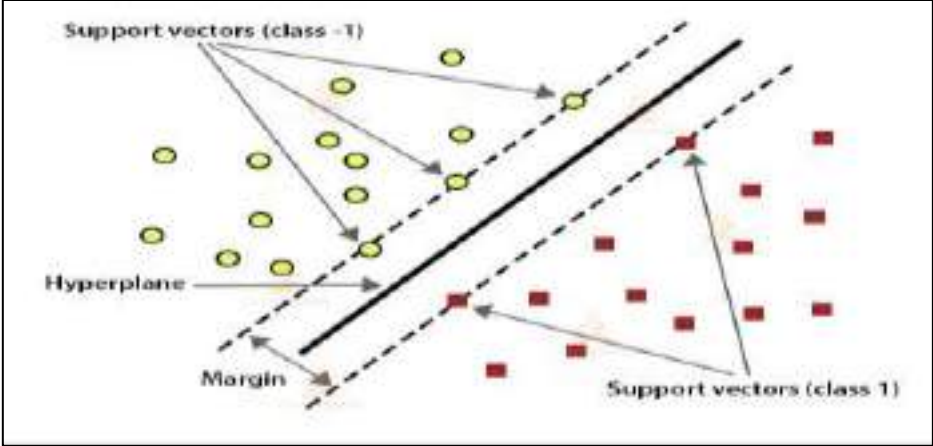


Figure 2[8]. Support Vector Machine

3.1.2. TF-IDF: Term Frequency, Inverse Document Frequency is a technique which is used to discover

meaning of sentences consisting of words and remove the in capabilities of Bag of Words technique



which is good for text classification or for helping a machine read words in numbers.

For a term t in document d , the weight $W_{t,d}$ of term t in document d is given by:

$$W_{t,d} = TF_{t,d} \log(N/DF_t) \quad (1)$$

Where: $TF_{t,d}$ is the number of occurrences of t in document d .

DF_t here is no of documents that contain the term t .

N here is the total no of documents present in corpus.[10]

By using TF-IDF we can measure the importance of words in a document and Common words such as “is”, “am” which do not affect the results due to IDF.

Profanity along with Pronoun- Most of the cyberbullying content contains profanity. Profanity alone cannot detect cyberbullying. Some studies, hypothesizes that cyberbullying text contains a swear /insult word along with the second person or third person (She, He, They, It, you) or a someone's name. The same is explained below in the table.

Text	“She”	“her”/name	“She is”	Profanity word	Label
1	Present	Present	Not present	Present	Cyberbullying
2	Present	Present	Not present	Not present	Non-Cyberbullying
3	Not present	Not present	Present	Present	Cyberbullying

Figure 3[7]. Labelling The Text

3.2. Methods

The detection of cyberbullying activities begin with extracting dataset from social network, where Input is text conversation, collected from Internet Archive.

3.2.1. Data Collection: The performance of the classifier, in this case SVM depends on the quality and size of dataset, which can be gathered by crawling the twitter data using Twitter API(rtweet , Twitter4j, Twit) and Tweepy Library5[11]. We crawl the twitter data using abusive words references as the query.

The data collected should consists of 3 attributes user id, group and comment. User id is used for the identification of a user, group attribute is used to recognize groups and comment defines the user comment on various status/group.

Once the dataset has been prepared, it has to be split into texts which includes comments, chats, etc. and media(images, videos, audio, etc.).

3.2.2. Data Pre-Processing: The data pre-processing is an important phase as Twitter data is noisy, thus pre-processing has to be applied to improve the quality of the extracted data and this includes removing all emoticons, folksonomies, slangs and stop words as they are not required for our purpose. The pre-processing step is done in the following: -

- **Lowering text:** This then takes the list of words that we got from tokenization and then change them to lowercase letters Like: 'YOU ARE BEAUTIFUL' is going to be 'you are beautiful'.
- **Stop words and encoding cleaning:** This is an essential part of the pre processing where we clean the text from those stop words and

encoding characters like \n or \t which do not provide a meaningful information to the classifiers.

3.2.3. Data Labelling: After data cleaning, the dataset is divided into two categories: training set and testing set. Where each dataset is labelled as bullying or no bullying.

3.2.4. Word Frequency analysis: After cleaning the dataset in the above steps , tokens can be extracted from it. The process of extracting tokens in known as Tokenization , where we take the extracted data as sentences or paragraphs and then output the entered text as separated words, characters or sub words in the form of a list.

These words need to be converted to numerical vectors so that each dataset can be represented in the form of numerical data. The vectorization of features are done using TF-IDF score which is helpful in balancing the weight between most frequent or general words and less commonly used words. TF-IDF value shows the importance of a token to a document in the corpus.

Example of Calculation of TF-IDF value:

Suppose a video comments contain 80 words wherein the word great appears 4 times. The Term Frequency (i.e., TF) for great then $(4 / 80) = 0.05$.

Again, suppose there are 100000 video comments in the dataset and the word great appears 1000 times in whole corpus Then, the Inverse Document Frequency (i.e IDF) is calculated as

$\log(100000/1000) = 2$. Thus, the TF-IDF value is calculated as: $0.05 * 2 = 0.1$.

3.2.5. Classification

The numeric vectors can be given as input to the classification algorithm. Here SVM is used as an classification algorithm.

Support vector machine (SVM) algorithm: An SVM model is the representation of data as points in space mapped so that the examples of the separate categories are divided by a clear gap that is wide as possible. SVM plots all the numeric vectors in space and defines decision boundaries by hyperplanes. Support Vector Machine is a discriminative classifier formally defined by a separating hyper plane.

Here the given labelled training data uses the algorithm to give the optimal hyper plane which can classify new data This hyperplane separates the vectors in two categories such that, the distance from the of each category to the hyperplane is maximum 5.

In addition to this SVM's can efficiently perform a non-linear classification, implicitly mapping their inputs into high dimensional feature space.

- It separates the training data set into two categories using a large hyperplane, that is in bullying context , positive and negative.
- After separating the training data, a matrix is generated known as confusion matrix and it shows the number of positive and negative words that are predicted right and number of positive and negative words that are predicted wrong.
- For each fold, prediction accuracy is determined on the basis of this confusion matrix and final accuracy is given by calculating the mean of all the individual accuracies of 10 folds. However, individual accuracy of a particular fold can be much higher than the mean of all accuracy.

	Correct Labels	
	Positive	Negative
Positive	11102	1398
Negative	1688	10812

Figure 4[13]. Confusion matrix for Support Vector Machine Classifier

From this confusion matrix, different Performance evaluation parameter like precision, recall, F-measure and accuracy are calculated. The table of confusion matrix formation is shown in table 1.

Precision: It gives the exactness of the classifier. It is the ratio of number of correctly predicted positive reviews to the total number of reviews predicted as positive.

Recall: It measures the completeness of the classifier. It is the ratio of number of correctly predicted

positive reviews to the actual number of positive reviews present in the corpus.

F-measure: It is the harmonic mean of precision and recall. F-measure can have best value as 1 and worst value as 0.

Accuracy: It is one of the most common performance evaluation parameter and it is calculated as the ratio of number of correctly predicted reviews to the number of total number of reviews present in the corpus.

	Precision	Recall	F-Measure
Negative	0.87	0.89	0.88
Positive	0.89	0.86	0.88

Maximum accuracy achieved after the cross validation analysis of Support Vector Machine classifier is **0.9406**.

Figure 5[12]. Evaluation parameters for Support Vector Machine classifier

3.3. Results

At this stage, researchers have carried out various experiments which indicates the results that are model achieves reasonable performance and could be usefully applied to monitor the heavy social problem of cyberbullying. It was observed that **tf-idf** is widely used for word frequency analysis and **svm** uses numeric vectors to define hyperplane and then

calculates the precision of positive and negative aspects of a data.

An algorithm is presented by the researchers to analyse and track cyberbullies.

- ```

Begin {
Step 1: Pre-process the data (d)
Step 2: Divide the processed data into each comment (c)

```



```

Step 3: Word Tokenization of each
comment (tok)
Step 4: Repeat while (i <= d)
Repeat (j <= tok)
If (word == positive)
countPos = countPos++
else
countNeg = countNeg++
end
Polarity = countPos - countNeg
end (step 4)
}

```

The above mentioned algorithm[14], is used to measure the polarity of a particular cyber bully based on the number of positive and negative words used by him. it can be that cyberbully is frequent or not.

As per the algorithm, the polarity is measured for various users for different categories : political , religious , sports and terrorism. Based on this polarity , if polarity is positive the user is considered as non bully else bully.

#### 4. CONCLUSION

Cyberbullying has many negative impacts on someone's life which includes depression, anxiety, anger, fear, trust issues, low self-esteem, exclusion from social events and sometimes suicidal behaviour too. This paper tries to address the issue of cyberbullying in media-based social network.

It is an appropriate definition of cyberbullying that incorporates both frequency of negativity and imbalance of power is applied in large- scale labelling, and is differentiated from cyber aggression. This proposed model will help cyber investigators and researchers pursuing the task of cyberbullying detection.

This research study focused on estimating the users behaviour's. A dataset consists of comments and replies by users on the Twitter were collected to perform descriptive analysis to analyse if a bully word was used in a positive or negative context and further identifying the most negative comments by a user in a particular group. The experiment was performed based on word-wise tokenization approach with the help of existing sentiment lexicons. The research work can be extended to analyze different Twitter groups or community pages to identify any unusual or offensive posts by the people against government agencies or others.

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## A STUDY ON PATTERN OF CODE MIXING IN A SEQUENTIAL BILINGUAL YOUNG ADULTS

Prabhu S<sup>1</sup>, Ruba S<sup>2</sup>, Dr. Kala Samayan<sup>3</sup>

<sup>1</sup>Assistant Professor, Department of Audiology & Speech Language Pathology, SRM MCH & RC, SRM University, Chennai-603203, Tamil Nadu, India.

<sup>2</sup>Assistant Professor, Department of Audiology & Speech Language Pathology, SRM MCH & RC, SRM University, Chennai-603203, Tamil Nadu, India.

<sup>3</sup>Associate Professor, Department of Audiology & Speech Language Pathology, SRM MCH & RC, SRM University, Chennai-603203, Tamil Nadu, India.

Correspondence should be Addressed to: Prabhu S, SRM University, Department of Audiology & Speech language pathology, SRM Nagar, Kattankulathur, Tamilnadu-603203, India.

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### ABSTRACT

The present study aimed to investigate and compares the pattern of Code Mixing in Sequential bilingual young adult. Thirty Sequential bilingual (Tamil-English) adults between the age range of 18-25 years were participated in this study. The bilingual participants were asked to describe the cookie-theft picture in Tamil. The patterns of Code Mixing (Intra Sentential Mixing and Intra Lexical Mixing) were analysed from the collected data. The results showed sequential bilingual adult uses 4.8% of Intra Sentential Mixing and 5.3% of Intra Lexical Mixing. In pattern of Code Mixing, Intra Sentential Mixing found to more in women. The present study concluded that Sequential bilingual speaker uses slightly higher percentage of Intra Lexical Mixing when compared to Intra Sentential Mixing in the picture description task. This finding will help Speech Language Pathologist to plan assessment, intervention and to development appropriate material for Sequential bilingual speakers in making clinical decision.

**KEY WORDS:** Code Mixing, patterns of Code Mixing, Sequential Bilingualism, Intra Sentential Mixing, Intra Lexical Mixing

### INTRODUCTION

In our daily life, we faced different society using different languages. Language is the most important one to facilitate communication, in the sense of transmission of information from one person to another. In general, people will acquire a single language initially their first language, or native tongue, the language used by those with whom, or by whom, they are brought up from infancy. Subsequent “second” languages are learned to different degrees of competence under various conditions. Complete mastery of two languages is designated as Bilingualism in many cases such as upbringing by

parents using different languages at home or being raised within a multilingual community children grow up as sequential bilinguals.

Sequential bilingualism refers to person who acquires a second language after gaining the initial exposure and understanding of first language. Bilingual and multilingual language is regarding the use of state of more than one language by a speaker when communicating with others. Moreover, in term of bilingualism and multilingualism, code mixing often occur. Mix code a language into another language is common situations in Indian people nowadays. It is happening in every gender, age,



status and society. Code mixing is the phenomena of code choice. The code here means the way to expressing something through the language using certain dialect, style, register or variety of language. Code mixing occurs in a daily life such as in conversations, an event like speeches, in a media (mass media and electronic media), seminar, and so much more (Wibowo A. et al., 2017). According to Nababan (1984), Code Mixing is the situation where the speakers mix the language or kind of language in a speech act without a situation or condition that need a mixing of language.

### TYPES OF CODES MIXING

Hoffman (1991), shows many patterns of code mixing based on the juncture or the scope of mixing where language takes place, Intra Sentential Mixing and Intra Lexical Mixing (the mixing occurs at the phonological level).

#### 1) Intra Sentential Mixing

This pattern of Code Mixing occurs within a phrase, a clause or a sentence boundary.

#### 2) Intra Lexical Mixing

This pattern of Code Mixing occurs within a word boundary.

There has been little research done, especially in Tamil to examine the pattern of Code Mixing in Sequential bilingual adult. Most of the studies have done research on Code Switching. The lack of research into the students' attitudes has left unexplored the effect of Code Mixing on learning. The present research will make an attempt to address the pattern of Code Mixing in sequential bilingual adult.

### AIM OF THE STUDY

The purpose of the study aimed to examine the pattern of Code-mixing (Intra Sentential Mixing and Intra Lexical Mixing) among Tamil-English Sequential bilingual young adults and to compare the pattern of Code Mixing between men and women.

### OBJECTIVES OF THE STUDY

1. To find out Intra Sentential Mixing in Sequential bilingual young adult
2. To find out Intra Lexical Mixing in Sequential bilingual young adult
3. To compare the pattern of Code Mixing in Sequential bilingual young adult
4. To compare the pattern of Code Mixing between men and women.

### METHODOLOGY

The present study included thirty subjects (15 men and 15 women) between the age range of 18 - 25years were participated in this study.

Participants with first language (Tamil-L<sub>1</sub>) and second language (English-L<sub>2</sub>) were included in

this study. Sequential bilingual subjects were included in this study. Participants with monolingual speakers, multilingual speakers and Interagency Language Roundtable (ILR) scale-a bilingual language proficiency scale score of <3 in Tamil-English languages were excluded from the study.

Subjects with Informed consent was obtained from each participant. Individual interviewing of all the subjects were carried out to obtain demographic data, occupation and medical history of the participant.

### TEST PROCEDURE

The test procedure was carried out in 4 phases.

#### Phase I – Selection of participation

Initially, each subject was asked about their language exposure. Subjects first language (L<sub>1</sub>) and second language (L<sub>2</sub>) details were collected. In this phase bilingual adult who has their first language L<sub>1</sub>- Tamil and Second language L<sub>2</sub>- English were only selected in this study. Only sequential bilingual subjects were participated in this study.

Interagency Language Roundtable (ILR) scale were used in all the subjects. Interagency Language Roundtable (ILR) scale was used to analysis their language proficiency in both the languages (Tamil and English). This is a 0–5-point self-rating scale. In this scale, whose language proficiency rating was 3-5 in both languages, those were only participated in this study.

#### Phase II- Demographic information

In this phase, Demographic information was collected from each participation. In demographic data the following details were collected from the subjects; Name, age, gender and occupation of the father/mother.

#### Phase III- Administration of test

In this phase, bilingual subjects were given picture description task. Cookie-theft picture was given for picture description task. In this task the examiner asks the subject to describe the picture in Tamil language (First language of the subject). Code mixing was analysed from the picture description task. The following patterns of Code Mixing was analysed from each subject;

- i. Intra Sentential Mixing
- ii. Intra Lexical Mixing

Each bilingual subject response was recorded using Sony voice recorder. Then the reordered samples were transcribed for the analysis.

#### Phase IV – Analysing of Data

All the sequential bilingual participations were described the cookie- theft picture in Tamil language. The following pattern of Code Mixing was analysed from each subject



### 1) Intra Sentential Mixing

This pattern of Code Mixing occurs within a phrase, a clause or a sentence boundary, it found in the form of words, phrases or clauses of a second language in a sentence of a first language.

#### Example

Antha poonu vanthu paiyana edhuka solli, **she is cheering him.**

In the above sentences, it can be seen that the intra-sentential Mixing is occurs in this task because the speaker inserted the English word or sentence boundary within a Tamil sentence. It is shown by the sentence '**she is cheering him**' inserted within the sentence. Mixing of clause and phrases of second language (English) within sentences were calculated. So, the total number of mixings of second language within the sentences are counted for analysis. The formulation of analysis of the pattern of Code Mixing has given by Sugiono (2006).

The analysis of percentage of Intra Sentential Mixing was carried out using the following formula,

$$P = F/N * 100$$

P = the percentage of Intra Sentential Mixing

F = frequency of Intra Sentential Mixing on the speech utterance

N = sample (the total number of sentences in the description passage).

### 2) Intra Lexical Mixing

This pattern of Code Mixing occurs within a word boundary in the form of prefix and morphemes.

#### Example:

Father vanthu vessels **lam** clean panitu irukanga

Entha picture **la** vanthu oru nayi iruku

Based on the data above, it can be seen that Intra-lexical mixing occurs in the word boundary. It shown by the word 'vessels**lam**' in the sentence above which the english word 'vessels' with tamil suffix '**lam**'. In second example, it shown by the word 'picture**la**' in the sentence above which the english word 'picture' with tamil suffix '**la**'. This mixing is happened because the ethnic and the language use affect in daily conversation.

The analysis of percentage of Intra Lexical Mixing was carried out using the following formula,

$$P = F/N * 100$$

P = the percentage of Intra Lexical Mixing

F = frequency of Intra Lexical Mixing on the speech utterance

N = sample (the total of words in the description passage).

#### Statistical Analysis

Descriptive statistical analyses (Mean, Range & Standard Deviation) were carried out to find out the baseline characteristics of the samples. Graphical representations such as bar chart have been presented for describing visually the participant's characteristics.

Analysis was performed using 22version of IBM SPSS software, with the alpha level set at 0.05.

## RESULT AND DISCUSSION

Table 1. Represents the mean age range of the study population. In this study, Age of mean ± St. Deviation is 21.37 ± 2.12.

**Table 1: Descriptive analysis of Age in the study population (N=30)**

| Parameter | Mean± Std. deviation | Minimum | Maximum |
|-----------|----------------------|---------|---------|
| Age       | 21.37±2.12           | 18      | 25      |

### Patterns of Code Mixing

Table 2. Represents the pattern of Code Mixing in Sequential bilingual adult speakers in the study population. Intra Sentential Mixing of mean ±

St. Deviation is 4.82 ± 6.61 in the study. Intra Lexical Mixing of mean ± St. Deviation is 5.39 ± 1.99 in the study.

**Table 2: Descriptive analysis of pattern of Code Mixing in Sequential bilingual young adult speakers in the study population (N=30)**

| Parameter             | Mean± Std. deviation | Minimum | Maximum |
|-----------------------|----------------------|---------|---------|
| Intra sentence Mixing | 4.82±6.61            | 0       | 20      |
| Intra lexical Mixing  | 5.39±1.99            | 2.33    | 10.20   |

Figure 1. Represents the graphic representation of pattern of Code Mixing in Sequential bilingual young adults This study result indicates, Sequential bilingual speaker uses 4.82% of Intra Sentential Mixing and 5.39% of Intra Lexical Mixing in the picture description task. Intra Lexical

Mixing is more when compared to Intra Sentential Mixing. Sequential bilingual adult speaker uses more Intra Lexical Mixing and less in Intra Sentential Mixing in the picture description task. From the study, it is shown the mixing of morphemes of second language within the sentences were found to

be more. Some of the supporting studies has found the similar finding of the pattern of Code Mixing in

bilinguals. (Pfaff, 1979; Poplack, 1980; Zentella, 1981, 1997).

**Figure 1. Shows the graphic representation of pattern of Code Mixing in Sequential bilingual adult Comparison pattern of Code Mixing among Sequential bilingual young adults**

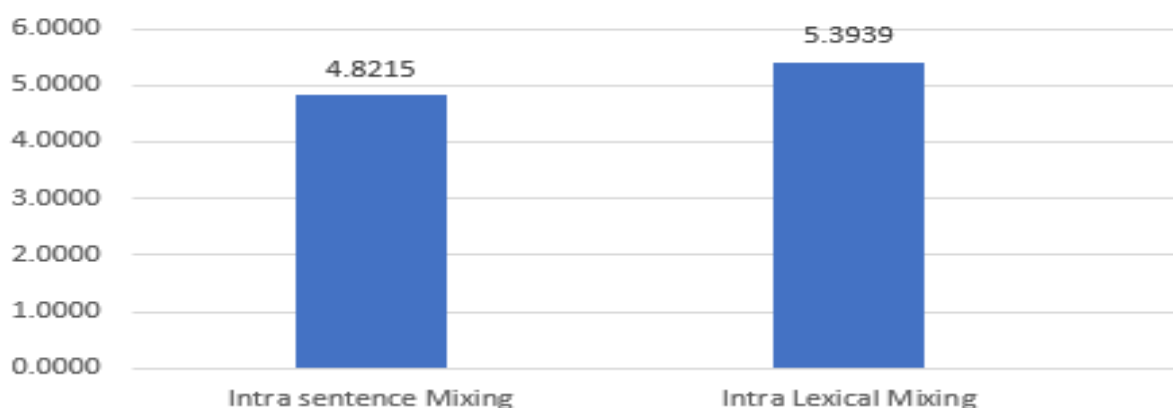


Table 3. Represents the comparison of pattern of Code-Mixing between men and women. For men, Intra Sentential Mixing of mean± St. Deviation is 1.0256±3.97 in the study. Intra Lexical Mixing of mean± St. Deviation is 5.5210±2.18 in the

study. For women, Intra Sentential Mixing of mean± St. Deviation is 8.6174±6.63 in the study. Intra Lexical Mixing of mean± St. Deviation is 5.2669±1.86 in the study

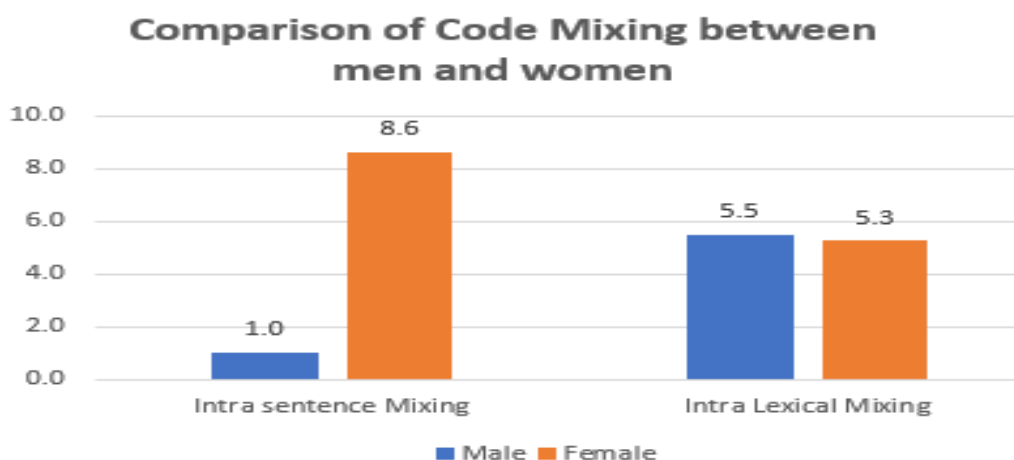
**Table 3: Descriptive analysis of compare the pattern of Code Mixing between men and women in the study population (N=30)**

| Parameter             | Average (Mean± Std. deviation) | Men                  | Women       |
|-----------------------|--------------------------------|----------------------|-------------|
|                       |                                | Mean± Std. deviation |             |
| Intra Sentence Mixing | 4.82±6.61                      | 1.0256±3.97          | 8.6174±6.63 |
| Intra Lexical Mixing  | 5.39±1.99                      | 5.5210±2.18          | 5.2669±1.86 |

Fig 2. Represents comparison of pattern of Code Mixing between men and women. The results indicate, Sequential bilingual men use 1.0 % of Intra Sentential Mixing whereas women use 8.6% of Intra Sentential Mixing. Sequential bilingual men use 5.5% of Intra Lexical Mixing whereas women use 5.2

% of Intra Lexical Mixing. The study result indicates, Intra Sentential Mixing was found to be more in women when compared to men due to their linguistic competency. There are no differences were found in Intra Lexical Mixing between men and women.

Figure 2. Shows the graphic representation of pattern of Code Mixing between men and women



## CONCLUSION

The present study concluded that Sequential bilingual speaker uses slightly higher percentage of Intra Lexical Mixing when compared to Intra Sentential Mixing in the picture description task. Women participations were Code Mixed more in Intra Sentential Mixing when compared to men participants. There is no difference found in Intra Lexical Mixing. This could be because of women having a higher linguistic competency in second language. Knowledge and understanding about Sequential bilingual language use are very important for SLPs to plan assessment, intervention and to development appropriate material for Sequential bilingual speakers in making clinical decision.

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## ENCRYPTION IN NETWORKING

Karan Singh Mann<sup>1</sup>, Ghanisht Sehgal<sup>2</sup>

The present overall town thought has brought the various dark people together through electronic media and data innovation. The greater part of individuals in today's world know about Internet, World Wide Web applications, out of these individuals 40% of them are still uses the dangerous perusing facility. As we talk about by and large town, there are different exchanges happening every single second of time, between individuals. To guarantee that they do safe trades come what may, there ought to be some development, which certifications and insurances of utilization. Offering security to the data is one of the rule part of data transmission over far off inconsistent association. The distant associations include sensors, it is related with base station.

Conveying security to the information is one of the primary part of information transmission over remote problematic organization. The remote organizations concur of indicators, it's associated with base station. he security need for remote sensor network is extremely fundamental and it is given by encryption and organization security. Encryption give security to end framework as well as to the whole organization framework. Giving security to organize is one of the significant issues on the grounds that the world is moving into computerized world. Encryption give security to information which is gotten to by director. The information ought to be gotten to simply by approved client; this security is given by encryption. The approved client ought to give client ID and secret phrase or some other exceptional information to get to got information It

happens in all sort of open and private organization where exchange and information correspondence happens. A few organizations can be private it happens inside association and a few organizations can be private. Pressure is a course of decreasing byte or cycle to address the data. Network encryption is utilized in different applications like government offices, association, undertakings, bank, business and furthermore in some different applications.

Encryption alludes to set of calculations, which are utilized to change the plain text over to code or the garbled type of text, and gives protection. To decode the text the recipient utilizes the "key" for the scrambled text. It has been the old technique for getting the information, which is vital for the military and the public authority tasks. Presently it has ventured into the civilian's everyday life as well. The internet based exchanges of banks, the information move through networks, trade of imperative individual data and so forth that requires the utilization of encryption for security reason.

Encryption is worried about "Stowed away Secrets". Encryption is useful for inspecting those shows, that are related to various perspectives in information security, for instance, check, order of data, non-forswearing and data uprightness. Encryption is the study of writing covertly code. All the more by and large, it is tied in with developing and dissecting conventions

### 1. SYMMETRIC ENCRYPTION

Symmetric encryption is a sort of encryption where



just one key (a mysterious key) is utilized to both scramble and unscramble electronic data. The substances imparting by means of symmetric encryption should trade the key with the goal that it very well may be utilized in the unscrambling system. This encryption strategy contrasts from awry encryption where a couple of keys, one public and one private, is utilized to scramble and decode messages.

By utilizing symmetric encryption calculations, information is changed over to a structure that can't be perceived by any individual who doesn't have the mysterious key to decode it. When the expected beneficiary who has the key has the message, the calculation switches its activity so the message is gotten back to its unique and justifiable structure. The mysterious key that the sender and beneficiary both use could be a particular secret phrase/code or it very well may be arbitrary series of letters or numbers that have been created by a solid irregular number generator (RNG). For banking-grade encryption, the symmetric keys should be made utilizing a RNG that is ensured by industry principles, for example, FIPS 140-2.

Sorts of symmetric encryption calculations:

**1.1 Data Encryption Standard (DES)** — DES is a sort of square code that scrambles information in 64-cycle squares and utilizing a solitary key that is one of three sizes (64-digit, 128-bit and 192-piece keys). Nonetheless, one of each 8 pieces is an equality bit, implying that a solitary length key that is 64 pieces is truly similar to utilizing a 56-cycle key. In spite of the fact that DES is one of the most punctual symmetric encryption calculations, it's seen as unreliable and has been expostulated.

**1.2 Triple Data Encryption Standard (TDEA/3DES)** — Unlike DES, triple DES can utilize a few keys, which empowers this calculation to utilize different rounds of encryption (or, more exact, a series of encryption, round of unscrambling, and one more round of encryption). While 3DES is safer than its DES archetype, it's not as secure as its

replacement, AES.

**1.3 Advanced Encryption Standard (AES)** — This encryption calculation is the thing that you'll most regularly discover is use across the web. The high level encryption standard is safer and proficient than DES and 3DES with key choices that are 128 pieces, 192 pieces and 256 pieces. Notwithstanding, while it's additionally a sort of square code, it works uniquely in contrast to DES and 3DES on the grounds that it depends on a replacement stage network rather than the Feistel figure.

## 2. ASYMMETRIC ENCRYPTION

Awry encryption utilizes a numerically related pair of keys for encryption and decoding: a public key and a private key. On the off chance that the public key is utilized for encryption, the connected private key is utilized for decoding; assuming the private key is utilized for encryption, the connected public key is utilized for unscrambling.

The two members in the lopsided encryption work process are the sender and the beneficiary; each has its own pair of public and private keys. To begin with, the sender gets the collector's public key. Then, the plaintext - or customary, decipherable message - is scrambled by the sender utilizing the beneficiary's public key; this makes ciphertext. The ciphertext is then shipped off the beneficiary, who unscrambles the ciphertext with their private key and returns it to clear plaintext.

In light of the single direction nature of the encryption work, one sender can't peruse the messages of another sender, despite the fact that each has the public key of the recipient.

The calculation is essentially a blend of two capacities – encryption capacity and decoding capacity. To express the self-evident, the encryption work scrambles the information and decoding capacity unscrambles it.

### 2.1 RSA( Rivest–Shamir–Adleman calculation)

Planned by the specialists that gave it its name





in 1977, RSA utilizes the factorization of the result of two indivisible numbers to convey encryption of 1024-bits and up to 2048-piece key length. As indicated by research directed in 2010, you would require 1500 years of computational ability to break its more modest 768-piece variant!

In any case, this implies that it is a more slow encryption calculation. Since it requires two distinctive keys of fantastic length, the encryption and unscrambling measure is slow, yet the degree of safety it accommodates touchy data is exceptional.

**2.2 Public Key Encryption Model(PKI)**

To make generally out of the encryption, general society keys should be worked to make, keep up with, utilize and disseminate, we need the association known as Public Key Infrastructure.

**3. SECURE SOCKETS LAYER (SSL) AND TRANSPORT LAYER SECURITY (TSL)**

Secure Sockets Layer (SSL) and Transport Layer Security (TSL) The encryption is appropriately embraced for Secure Sockets Layer, Netscape has first evolved it, SSL is fundamentally implied for Internet security convention utilized by the web servers and programs. It turned into the fundamental piece of safety known as Transport Layer Security. SSL and TSL utilize CA (Certificate Authority), at whatever point program recovers secure site page

there will an extra 's' after the 'http'. The program actually takes a look at three things while sending the public key and endorsement,

- 1.Is that the declaration is legitimate
- 2.Is that the endorsement comes from confided in party
- 3.The testament has the appropriate connection with site, which it is coming from.

While starting a got association between the two PCs, one will create the symmetric key and ships off other utilizing public key encryption. Then, at that point, the two PCs can have safe correspondence utilizing symmetric key and uneven key. When the meeting is finished, each will dispose of the symmetric key utilized for that specific meeting. For next meeting it requires again new keys, and cycle is rehashed.

AES is the most well known and most utilized broadly block figure. It has three adaptations (AES-128, AES-192, and AES-256) fluctuate in sizes their keys (128-digit and 192 - bit and 256-digit) and the quantity of rounds (10,12, and 14) To scramble and unscramble there are four unique strides for

**AES Calculation**

| Algorithm | Key Length | Block Size | Number of Rounds |
|-----------|------------|------------|------------------|
| AES-128   | 4          | 4          | 10               |
| AES-193   | 6          | 4          | 12               |
| AES-256   | 8          | 4          | 14               |

1.**Sub Byte**-In this progression, the Sub-bytes of information in plain text are supplanted by some pre-characterized upsides of t he switch box are call replacement box

2. **Shift Rows** during the time spent change columns in the framework 4 × 4 is moved to the left r pieces and r differs with the lines of the grid and the r relies upon the



key and the line number (r=0 for row1, r=1 for row2, r=2 for row3, r=3 for line 4).

3.**Mix Columns-Mix** segments or shift segment mix is dealing with the section during the State of the segment, and treat every segment as a four-term polynomial. Thought about segments as polynomials on GF (28) and hit the module  $X^4 + 1$  with polynomial fixed (Q) acquired from  $(Q) = \{2\} X^3 + \{3\} X^2 + \{1\} \{x\} + \{1\}$ .

4.**Add Round Key**-Add round key is a significant stage in the visit is put away information with 128-digit sub key of the current round utilizing a significant development, Add round key is utilized in two better place



# CODE OF CONDUCT AND PROCUREMENT MANAGEMENT IN SELECTED PUBLIC SECONDARY SCHOOLS: EVIDENCE IN KENYA

Joyce Cheruto Rotich<sup>1</sup>, Dr. Pauline Keitany<sup>2</sup>, Dr. Hellen W. Sang<sup>3</sup>

<sup>1</sup>MBA, School of Business, University of Kabianga, Kenya,

<sup>2</sup>Department of Marketing Management Science, Tourism and Hospitality, University of Kabianga,

<sup>3</sup>Department of Marketing Management Science, Tourism and Hospitality, University of Kabianga

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## ABSTRACT

*Economic and social challenges have obliged many organizations to re-evaluate their manner and approach in maintaining sustainable relationships with their customers. It has been witnessed in most successful organizations that implementation of ethical practices in procurement has ensured customers get the best services. The paper's objective is to establish the relationship between codes of conduct and procurement management. The study was guided by virtue ethical theory. Correlation research design was used with a target population of 1100 tendering committee in 220 public secondary schools. A sample size was 294 respondents was selected using stratified random sampling technique. Questionnaires were used to collect data. Descriptive and inferential methods were utilized for data analysis and presentation. The findings indicated that code of conduct had significant effect on procurement management ( $P=0.000<0.05$ ). The study recommended that the schools should continuously review of procurement staff from breach of code of conduct to reduce fraud and corruption. Therefore, there is need to tighten internal control systems in detecting procurement corruption and fraud to ensure integrity in the process. The study suggested further study to be done in internal control system and procurement management.*

**KEYWORDS:** Code of Conduct, Procurement Management, Correlation Design, Kenya

## INTRODUCTION

Globally, organizations view establishment of a regulatory body, and framework that is comprehensive, legal and transparent in procurement activities as one among the most essential activities that guarantees accountability and transparency concerning public funds (Prier & McCue, 2006). For organizations to achieve value for money and contribute to the efficient service delivery, public procurement practice must adopt a strong ethical bent. It must be practiced so as to be void of leakages and loss, corruption and vendor favoritism. The way to address these concerns is by adopting a strong sense of ethics such as avoiding collusion, discouraging fake competition, removing any arbitrariness from the bid evaluation process, ensuring that the goods and services received reflect the precise quantities actually delivered and using slicing to avoid adopting the appropriate procurement method (Leenders, Johnson, Flynn and Fearon, 2014)

The applicable ethics in public procurement which the government owned entities must also

adhere to include avoidance of collusion, avoidance of conflict of interest, equal opportunity, confidentiality and limited disclosure, avoidance of fraudulent practices, and avoidance of obstruction and undue delay in procurement processes (GOK, 2015). Several studies have given more importance on the ethical practices in procurement process such as (Achuora, 2011) who concurs that adopting procurement regulation improves efficiency in public sector procurement management. Jackson & Eunice, (2014) indicated that ethical behavior in procurement process is built in a corporate and functional framework that is beneficial to all stakeholders. This was further supported by (Kizito and Khomba, 2013) who emphasized on the importance of ethical practices on procurement as necessary for the purpose of long-term relationship and establishment of supplier goodwill.

An effective ethical procurement system that entails transparency, accountability and stakeholder participation enhances governance reforms. Procurement ethics ensures integrity in public funds,



efficiency and accountability which are vital drivers of procurement management in organizations. Ethical practices in public procurement ensure proper use of public funds towards quality service delivery, customer satisfaction, timely payment of suppliers and efficient supply selection among other benefits. The major challenge faced by most organizations globally is lack of effective application and implementation of ethical practices in procurement process. Despite the important ethical practices in procurement in many organizations being in place, there is yet a non-compliance culture, coupled with lack of transparency and accountability that has led to embezzlement of public funds and unethical issues in procurement practices currently. Recently there has been cases of some stakeholders in the schools and especially parents who have been known to be involved in outcries regarding the utilization of resources in these schools. A number of studies has been carried out relating to ethical practices in procurement process and the finding indicates that many organizations observes guidelines put in place by public procurement Act 2015 and manual for secondary schools 2005. However, it is not yet clear if procurement process in public sector in Kenya is free from unethical practices. Therefore, this study was carried out to ascertain ethical practices and procurement management in public secondary schools in Kericho County, Kenya.

The study was used the following objectives to determine the relationship between codes of conduct and procurement management in selected public secondary schools in Kericho County.

## 2. LITERATURE REVIEW

### Theoretical Review

Virtue ethical theory was proposed by Plato, Aristotle & Stoics in the 19<sup>th</sup> century. The theory is a methodology that emphasizes on regulations, procedures, consequences and particulars act in procurement and gives attention to the person involved in heading the procuring process (Aristotle and Ross, 2009). Aristotle further considered the issue of moral agency which includes deliberation and rational choice. A voluntary act is a responsible act hence an agent is either praised or blamed as per the acts and character.

This implies that an agent should take control and cognizant of their actions so that an act can qualify to be voluntary. Cahn, (2002) indicates that an agent should not be held accountable for involuntary acts for they are carried out of external force, ignorance or to prevent unnecessary evil.

Covey, (1992), further indicates that people believe in what they do and that these virtues lead to organizational success and personal satisfaction. Courage, liberality, pride, temperance, cordiality, justice, truthfulness and magnificence are the basic virtues that Aristotle proposes that it enables people

to work together in a better way. Thus, virtue is more like a way of being rather than something done.

This theory is relevant to this study because it assessed the procurement officials if they are had right intentions and if they are following correct rules as well ethical practices as required. The theory also points out its relevance through praising or criticizing the organizations if they are promoting, expressing or preventing virtues and development (Annas, 2009)

### Empirical Literature

Codes of conduct refers to risk-rating compliance systems that determines levels and measures of ethical risks and are being applied by institutions as tools that helps in meeting the procurement due diligence commitments.

James, Idua, Kilungu and Kadem (2016) did a study on the effects of ethical sourcing on organization performance in the energy sector in Kenya. The researchers employed descriptive research design with a target population of 100 employees from the company. The study focused on corporate social responsibilities, ethical codes and ethical policies. The study used simple random sampling and a sample size of 72 individuals. The findings indicate that much has to be done to improve on the ethical codes because many respondents were not sure of its impact on sourcing ethics. The current study therefore focused on ethical practices on procurement management and adopted both descriptive and correlation research design. The focus was on codes of conduct, ethical principles and ethical risks.

It comprises of selected dimensions such as professionalism, policies, behavioral standards and, rules and regulations. The legal regulations in a country are to ensure that procurement is done in ethical manner. People are not unethical but they acquire such traits as they grow and codes of conduct would not work well if system are not changed (Mlinga, 2010).

This was supported further by (Makali, 2018) who studied procurement and Humanitarian organizations in Kenya. The study used survey research design, research data was from the 70 humanitarian organizations in Kenya as per the year 2016. Questionnaires were used for data collection and analyzed using descriptive statistics. The researcher therefore, expound that ethical practice in procurement is vital due to stakeholder's pressure. Ethics in procurement should always be beyond the legal requirements. Several researchers have proposed the notion that codes of conduct exist to boost ethical environment in the procurement process. However, the study focused on humanitarian organizations while the current study focused on secondary schools.

Omanji and Moronge, (2018) did a study in Kenya about procurement practices on performance



of the public sector. They adopted descriptive survey design and the target population comprised of management employees of Narok County. Stratified sampling was used and a sample size of 196 respondents. Data was collected using questionnaires and analyzed by the aid descriptive statistics. However, the current study sought to investigate on ethical practices and procurement management in selected public secondary schools.

Ethical practices in procurement comprises of integrity, diligence, fairness, consistency, respect and trust to avoiding conflict of interest. The Public Procurement Act 2015 requires that all the disposal be conducted on bases of good conduct from time to time as given by the Public Procurement Regulatory Authority, Government of Kenya, (2015) shows the codes of conduct that were structured by the PPRA and it guides the public procuring entities as well as the winning bidders.

Dinah and Pressley, (2013) did a survey on marketing ethics and gave a good reason to formulate codes of conduct and argued that ethical codes have a positive influence on employee's morals which gives them a set of ethical values and enforcing policies. Thus, all the employees should model their behaviors in an ethical manner.

Heungski and John, (2013) did a study on the impact of ethics programmes and ethical culture on misconduct in public service organizations. The study utilized a survey research design. The study indicates that there is a significant relationship between ethics programmes and misconduct mediated by ethical culture. Further the study found that ethics programme as set of procedures, policies and activities would be necessary in ensuring that the employees behave e in the right manner through understanding and complying with ethical standards of organizations. Therefore, this study sought to

establish the relationship between ethical practices and procurement management in selected public secondary schools in Kericho County, Kenya

Ayoyi and Mukoswa, (2015) did a study in Kenya about ethics and procurement process. The study recommended that there is need for procuring entities to establish a training policy and codes of conduct that guided all the procurement staff. Clark and Leonard, (2010) found that codes are ineffective when it comes to establishing an employee's decision making.

### 3. RESEARCH METHODOLOGY

Correlation research design was used to examine the relationship between ethical practices and procurement management. The study targeted the selected public secondary schools from total of 220 public registered secondary schools in Kericho County. A population of 1100 tendering committee from 220 public registered public secondary schools in Kericho County. Stratified sampling technique was used to select 294. Questionnaires were appropriate for data collection. Descriptive statistical analysis was done using means and standard deviation. ANOVA analysis was used inferential statistics at 5% significant level.

### 4. DATA ANALYSIS

#### Descriptive Statistics

Descriptive statistics analyzed the code of conduct where minimum, maximum, mean and standard deviation was obtained for purposes of interpretation. This were obtained from frequencies pertaining to Likert scale of 1-5. The code of conducted were examine according to the result in table 1.

**Table 1: Code of Conduct Results**

|                                                                                                                         | SA(5)       | A (4)       | N(3)       | D(2)       | SD(1)    | N   | Min  | Max  | Mean   | SD     |
|-------------------------------------------------------------------------------------------------------------------------|-------------|-------------|------------|------------|----------|-----|------|------|--------|--------|
| School has code of conduct guiding its procurement management is well understood by procurement staff.                  | 42 (16.1%)  | 178 (68.2%) | 40 (15.3%) | 0 (0.0%)   | 0 (0.0%) | 261 | 2.00 | 5.00 | 4.0000 | .57513 |
| The same standards of evaluation are applied to all suppliers                                                           | 53 (20.3%)  | 167 (64.0%) | 41 (15.7%) | 0 (0.0%)   | 0 (0.0%) | 261 | 3.00 | 5.00 | 4.0460 | .59951 |
| School's code of conduct does not allow procurement staff or members to influence the procurement procedures in any way | 151 (57.9%) | 77 (29.5%)  | 33 (12.6%) | 0 (0.0%)   | 0 (0.0%) | 261 | 3.00 | 5.00 | 4.4521 | .70888 |
| Competitive bid processes are carried out professionally and free of any misleading information                         | 87 (33.3%)  | 146 (55.9%) | 28 (10.7%) | 0 (0.0%)   | 0 (0.0%) | 261 | 3.00 | 5.00 | 4.2261 | .62531 |
| All staff adhere strictly to the codes of conduct in the school                                                         | 88 (33.7%)  | 145 (55.6%) | 14 (5.4%)  | 14 (15.4%) | 0 (0.0%) | 261 | 2.00 | 5.00 | 4.1762 | .75928 |



Table 1 indicated that school had sufficient code of conduct guiding its procurement management which were well understood by procurement staff (mean of 4.0000). Most respondents varied from disagree to strongly agree (minimum of 2 and maximum of 5). However, code of conduct guide on procurement management had low variation (Standard deviation of .57513).

Same standard was found to be adequately applied to all suppliers (mean of 4.0460). The response ranged from neutral to strongly agree (minimum of 3.00 and maximum of 5.00). Variation of same standards of evaluation on suppliers was low (standard deviation of 0.59951).

School's codes sufficiently do not allow procurement staff or members to influence the procurement procedures (mean of 4.4521). Variation in not allowing procurement staff or member to influence procurement procedure was low (standard deviation of 0.70888). The respondents were between neutral to strongly agree since the minimum was 3.00 and maximum of 5.00.

Competitive bid processes were greatly carried out professionally and free of any misleading information (mean of 4.2261). The respondents were ranged from neutral to strongly agree (minimum of 3 and maximum of 5). Its variation in carrying

competitive bid process was low (standard deviation of 0.62531).

It was further revealed that school staffs somewhat adhered strictly to all the codes of conduct in the school (mean of 4.1762). The responded results ranged from disagree to strongly agree (minimum of 2 and maximum of 5). The adherence to codes of conducts variation was low (standard deviation of 0.75928).

The result concurs with Makali (2018) who found that codes of conduct assisted to boost procurement process. However, the study as on procurement and humanitarian organization in Kenya. Similarly, Omanji and Moronge (2018) also found that integrity, fairness was among ethical codes to be adopt. The study concentrated on procurement practices and performance. Therefore, code of conduct assists in ensuring professionalism, fairness and adherence to procurement process.

### Inferential Statistics

ANOVA analysis was used to test code of conduct were investigated on procurement management. The hypotheses were tested using 5% significant level. This was indicated in table 2.

**Table 2: ANOVA for Relationship Between Code of Conduct and Procurement Management**

|                                          |                |            | Sum of Squares | df  | Mean Square | F      | Sig. |
|------------------------------------------|----------------|------------|----------------|-----|-------------|--------|------|
| Procurement Management * Code of Conduct | Between Groups | (Combined) | 31.220         | 10  | 3.122       | 29.273 | .000 |
|                                          | Within Groups  |            | 26.663         | 250 | .107        |        |      |
|                                          | Total          |            | 57.884         | 260 |             |        |      |

ANOVA results revealed that there existed significant relationship between code of conduct and procurement management ( $F_{(3,257)} = 200.485$ ,  $P < 0.05$ ). This finding concur with Heungski and John, (2013) who found that there existed significant relationship between ethical program on public service organization. However, the current study did not focus on moderating effect of ethical culture misconduct in public service organization.

$H_{01}$ : There is no significant relationship between Codes of conduct and procurement management in selected public secondary schools in Kericho County.

The null hypothesis was reject and alternative accepted. Therefore, the results their codes of conduct had positive significant effect on procurement management ( $P=0.000 < 0.05$ ).

## 5. CONCLUSIONS AND RECOMMENDATION

### Summary

Results concerning to code of conduct showed that schools had sufficient code of conduct that assisted in guiding procurement management that were understood by procurement staff. Same standard was adequately applied to all suppliers to remove favouritism and corruptions. According to the school's codes procurement staffs were greatly prohibited to influence procurement procedures. Professionalism and free of misleading information were greatly adhered to during the competitive bidding process. Staffs were adhered strictly to the code of conduct in the school to great extent. The study therefore, found that code of conduct had positive significant influence on procurement management.



## Conclusions

The study concluded that code of conduct had significant effect on the procurement management. This was contributed by sufficient code of conducted that assisted in guiding procurement management. The school also used same standard reducing corruption and favouritism among suppliers. School's codes reduced also procurement staff interference. Code of conduct assisted in ensuring professionalism and free of misleading information during procurement management. Therefore, the school management ensured that all procurement staff followed the code of conduct.

## Recommendations

The study recommended training that would improve procurement member since majority of the member were teachers who have not attended any training or seminars. The schools should continuously review of procurement staff from bridge of code of conduct to reduce fraud and corruption. The management should ensure that there is no corruption and favouritism between suppliers and procurement staff since it affect procurement process. Therefore, all member vetted as procurement staff should act professionally in procurement management.

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# SEASONAL EPIDIOMOLOGY OF DIARRHOEA, MALARIA AND PNEUMONIA RELATIVE TO CLIMATIC FACTORS: EVIDENCE FROM ASABA, SOUTH-SOUTHERN, NIGERIA

**Amaefula Chibuzo G.**

*Department of Mathematics and Statistics, Faculty of Science, Federal University Otuoke,  
Bayelsa State, Nigeria*

*ORCID iD URL: <https://orcid.org/0000-0003-1945-9156>*

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## ABSTRACT

*Understanding the seasonal epidemiology of diarrhoea, malaria and pneumonia relative to climatic factors is the thrust of the study. Empirical monthly data sets used covered the period of 2012M1-2019M12. Graphical exploration, methods of seasonal variability and Chi-square test of homogeneity were employed. The results showed that diarrhoea, malaria and Pneumonia are very high at the peak of rainy season (July-September) especially August, when humidity is relatively high and temperature is low. The result also indicted that the null hypothesis of no seasonal variation in the incidence of malaria and pneumonia is rejected in favour of the alternative as Chi-squared values are significant under 5% level respectively. This implies that the incidence of malaria and pneumonia have seasonal occurrence. However, the findings are imperative for the diseases seasonal determination, surveillance and control in Asaba, south-southern Nigeria.*

**KEYWORDS:** *Seasonal epidemiology, Diarrhoea, malaria, pneumonia, climatic factors*

## 1. INTRODUCTION

Climatic factors and their variability play significant role in the incidences of many diseases that affects human health. Weather factors such as temperature, precipitation and humidity are directly related to fluctuations in the incidences and transmission of some diseases through pathogen (viral, bacterial, etc.), bioassay system (rats, etc.), vector (mosquito, flies, etc.), non-bioassay system (water, soil, etc.) and human host. The ability to forecast and identify epidemic events becomes one important component of control efforts that can contribute to the timely implementation of effective prevention and treatment, as recognized by on-going efforts to develop malaria early-warning systems (MEWS) (Cox and Abeku, 2001; Thomson and Connor, 2001; WHO-RBM, 2001).

Quantifying the role of climate variability, and doing so in the context of epidemiological dynamics, remains an important open problem for these regions and for epidemic malaria in general. Recent developments on parameter estimation for nonlinear dynamical systems now make possible the consideration of epidemiological models that can be confronted to noisy and incomplete data (Ionides *et al*, 2006 and King *et al*, 2008).

However, the observable high incidence rate and severity of some diseases such as diarrhoea, malaria and pneumonia in certain varying weather conditions in many cities in Nigeria, including Asaba has become a concern that spurs the need to research on the above subject matter. Nevertheless, the essence of the study is to empirically examine the seasonality of the aforementioned diseases in relationship to temperature, rainfall and humidity in Asaba, Delta state.

### 1.1 Brief History of Asaba Weather

Asaba is a tropical climate with less rainfall in summer. September accounts for the highest number of rainy days together with the highest relative humidity (85.75 %). And the lowest number of rainy days occurs in December. The month of January has the lowest relative humidity (54.17 %). The temperatures are highest on





average in February, at around 29.0 °C | 84.3 °F. August has the lowest average temperature of the year. It is 25.0 °C | 76.9 °F. The variation in the precipitation between the driest and wettest months is 198 mm | 8 inch. During the year, the average temperatures vary by 4.1 °C | 7.4 °F.

### 1.2 Diarrhoea and Weather Condition

However, studies have reported different directions in the association between rainfall and diarrhoea disease; some studies have shown positive associations, and others have shown inverse associations. Additionally, both drought and flood have been associated with increased diarrhoea (WHO 2003). Improved understanding of the effects of rainfall extremes and related weather events is necessary to prepare for and address public health in this uncertain future. The World Health Organization (WHO) estimated that between 2030 and 2050, climate change will cause an additional 48,000 deaths per year from diarrhoea alone (WHO 2018). Some of this expected increase in risk is related to projected increases in extreme weather events (including flooding and drought).

Chou et al.(2010) examined a climate variation-guided Poisson regression model to predict the dynamics of diarrhoea-associated morbidity. Their results indicated that the maximum temperature and extreme rainfall days were strongly related to diarrhoea-associated morbidity. The impact of maximum temperature on diarrhoea-associated morbidity appeared primarily among children (0-14years) and older adults (40-64years), and had less of an effect on adults (15-39years). Otherwise, relative humidity and extreme rainfall days significantly contributed to the diarrhoea associated morbidity in adult. Wang *et al.*, (2019) studied the lag effect and influencing factors of temperature on other infectious diarrhoea in Zhejiang province and the source of heterogeneity on other infectious diarrhoea (OID) concluded that either high or low temperature could increase the risk of OID, with a lag effect noticed.

Alicia *et al.*, (2020) studied the impact of rainfall on diarrhoea: testing the concentration dilution hypothesis using a systematic review and meta-analysis. Their result showed no linear association between non-extreme rain exposures and diarrhoeal disease, but several studies found a nonlinear association with low and high rain both being associated with diarrhoea and concluded that the effect of rainfall depends on the antecedent conditions. Future studies should use standard, clearly defined exposure variables to strengthen understanding of the relationship between rainfall and diarrhoeal illness.

### 1.3 Malaria and Weather Condition

The temperature sensitivity to malaria parasites has been established in the past (Boyd,1949, Macdonald, 1957). At lower altitudes where malaria is already a problem, warmer temperatures will alter the growth cycle of the parasite in the mosquito enabling it to develop faster, increasing transmission and thus having implications on the burden of disease (Rogers, 1996 and Sutherst, 1998). Studies in Africa revealed mixed results, with the highest number of malaria cases during the rainy season in Mali (Koram *et al.*,2003 and Dicko *et al.*, 2005). Highest cases of falciparum malaria were found in north-eastern India during the rainy season (Dev and Dash, 2007).

Amaefula. (2010) studied the seasonality of malaria outbreaks in the north-western Nigeria, so as to determine how temperature and rainfall relates to malaria outbreaks. The results showed that at a high temperature (April-May) malaria infection is very low but increases as temperature decreases and fluctuates. And at the peak of the rainy months (July-August), malaria infection is very low but rises through September to its peak in October due to increased number of stagnant pools and sewages which form the breeding habitats for the mosquitoes immediately after the rainy months. Egbendewe-Mondzozo *et al.*,(2011) used a semi-parametric model to show that a marginal increase in temperature and precipitation could cause a significant change in malaria cases in many African countries. Augusto et al.(2015) showed that the optimal temperature for malaria transmission in 67 cities in sub-Saharan Africa lies in the range [16–28]°C.

### 1.4 Pneumonia and Weather Condition

Pneumonia is a common illness which occurs in all age groups, and is a leading cause of death among the elderly, children under five years and people who are chronically and terminally ill. Pneumonia claims more children less than 5 years of age in Nigeria (Onche, 2009; Falade and Osinusi, 2009).

Oluleye and Akinbobola (2010) investigated the relationship between malaria, pneumonia, rainfall and air temperature over Lagos, Nigeria. Their results showed that coefficient of correlation between rainfall and pneumonia was high in the range of 50 and 90% and positive in February, May, July and August. The months of March, April, June, September, October and December also showed positive correlation but the coefficients are so weak and insufficient. An increased incidence of malaria in north-west of India has been suggested through computational modelling (Laneri *et al.*, 2010).

Rahman *et al.*, (2011) found the highest number of malaria (135), diarrhoea (266) and pneumonia (371) cases occurred during the rainy season. The findings are consistent with other national and international studies.



In the Chittagong hill tract districts of Bangladesh, where malaria is most endemic, the frequency of cases was highest in rainy season. Unfortunately, very few studies on the relationship between various environmental variables and trends of infectious disease incidence have been performed so far in Bangladesh, although there are reports of some infections increasing sporadically in different regions of the country (Rahman, 2008; Huq and Ayer, 2008; Kabir *et al.* 2016). Climate change and health related studies are so far mainly reported from developed countries, but studies from vulnerable countries are still meagre (Akompab *et al.*, 2013, Maibach *et al.*, 2008)

The remaining part of the paper is arranged as follows; section two presents the materials and methods, section three presents data analysis and results and section four deals with conclusion

**2. MATERIALS AND METHODS**

The section presents the materials and methods used in the study. The Framework for calculating and testing for seasonal variation, chi-square test of homogeneity, source and method of data collection and tool used for analysis are succinctly presented under this section.

**2.1. Source and Method of Data Collection**

The data used in the study is a secondary and collected via transcription from documented records of Federal Medical Centre Asaba. And the data set covered the period of years (2012M1-2019M12).

**2.2 Seasonal Variation Framework**

The method follows a step by step treatment of the data variable under investigation. However, seasonality is a well-known phenomenon in the epidemiology of many diseases, but straightforward analytical method for the examination and evaluation of seasonal patterns are limited. The study employed chi-square test to test the evenness of the quarterly distributions of the reported cases of the disease under investigation.

The procedure is as follows;

- The mean number of malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases adjusted for 30-day month using 31-day months = (Number of reported malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases for such month × 30) divided by (31 × Number of years).
- The mean number of malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases adjusted for 30-day month using 30-day months = (Number of reported malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases for such month × 30) divided by (30 × Number of years).
- The mean number of malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases adjusted for 30-day month for February is computed to take care of the leap-years = (Number of reported malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases for February × 30) divided by ((28 × Number of none leap-years) + (29 × Number of leap-years)).
- Index of malaria, pneumonia, diarrhoea, temperature, rainfall and relative humidity cases (columns (4)) = (Mean Number of Malaria /typhoid cases in 30-month × 100) divided by (total years annual mean).
- Seasonal variation is computed as the sum of monthly indices in each quarter divided by 3. The mathematical representation is as follows;

$$\left. \begin{aligned} Q1 &= (M1 + M2 + M3)/3 \\ Q2 &= (M4 + M5 + M6)/3 \\ Q3 &= (M7 + M8 + M9)/3 \\ Q4 &= (M10 + M11 + M12)/3 \end{aligned} \right\} \quad (1)$$

**2.3 Chi-Square Test of Homogeneity**

Chi-Square test of homogeneity will be adopted to test the null hypothesis that there is no seasonality effect on the occurrence of these diseases (malaria, diarrhoea and pneumonia cases) across the quarters (seasonal variation). In other words, the chi-square test of homogeneity is used to test whether the quarterly indices are the same. If the Chi-square value is significant, the null hypothesis is rejected in favour of the alternative. Then it is added that seasonality exist.

The formula is;

$$\chi^2 = \sum_{i=1}^n \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (2)$$



where,  $O_{ij}$  is the observed number of Malaria, diarrhoea and pneumonia cases in the  $i^{th}$  row and  $j^{th}$  column category,  $E_{ij}$  is the expected number of Malaria, diarrhoea and pneumonia cases and it is obtained using the following formula

$$E_{ij} = \frac{O_{i.} \times O_{.j}}{O_{..}} \tag{3}$$

where,  $O_{i.}$  is the observed column totals,  $O_{.j}$  is the observed row totals and  $O_{..}$  is the grand total. The null hypothesis is rejected if  $\chi^2 > \chi^2_{0.05, k-1}$ . Note that the p-value is not significant if the null hypothesis is rejected. The following are the statement of the hypothesis  
 $H_{O1}$ : There is no seasonal effect in the occurrence of diarrhoea.  
 $H_{A1}$ : There is seasonal effect in the occurrence of diarrhoea.

$H_{O2}$ : There is no seasonal effect in the occurrence of malaria  
 $H_{A2}$ : There is seasonal effect in the occurrence of malaria.

$H_{O1}$ : There is no seasonal effect in the occurrence of pneumonia.  
 $H_{A1}$ : There is seasonal effect in the occurrence of pneumonia.

*Decision Rule:* If  $\chi^2$  value is greater than  $\chi^2$  - table value we reject the null hypothesis ( $H_o$ ) and accept the alternative hypothesis ( $H_1$ ), and if otherwise, we accept the null hypothesis ( $H_o$ ) and reject the alternative hypothesis ( $H_1$ ) at 5% level of significance

**3.DATA ANALYSIS AND RESULTS**

This section presents the estimates of the monthly indices of temperature, rainfall and humidity and diseases such as diarrhoea, malaria and pneumonia cases. The pictorial representation of the interaction between the climatic factors and these diseases, test for seasonal variation and the discussion of results are also presented under this section.

**3.1 Analysis of Monthly Indices**

The Table 1 below presents the analysis of monthly indices of the climatic factors and the diseases under study in Asaba, Delta State.

**Table1. Monthly indices of Temperature and Rainfall in Asaba, Delta State**

| Month Of Reported Cases (1) | Mean Temperature ( $^{\circ}C$ ) (2) | Mean temperature Adjusted for 30-day month (3) | Index of Temperature (4) | Mean Rainfall (mm) (5) | Mean rainfall adjusted for 30-day month (6) | Index of rainfall (7) |
|-----------------------------|--------------------------------------|------------------------------------------------|--------------------------|------------------------|---------------------------------------------|-----------------------|
| Jan                         | 18.625                               | 2.253                                          | 83.47                    | 7.24                   | 0.8758                                      | 4.307                 |
| Feb                         | 21.625                               | 2.833                                          | 104.96                   | 15.54                  | 2.0358                                      | 10.012                |
| Mar                         | 23.75                                | 2.873                                          | 106.44                   | 62.31                  | 7.5375                                      | 37.067                |
| Apr                         | 23.25                                | 2.906                                          | 107.67                   | 155.11                 | 19.3888                                     | 95.349                |
| May                         | 22.65                                | 2.740                                          | 101.52                   | 213.24                 | 25.7952                                     | 126.854               |
| Jun                         | 23.375                               | 2.922                                          | 108.26                   | 246.7                  | 30.8375                                     | 151.650               |
| Jul                         | 22.375                               | 2.707                                          | 100.29                   | 336.88                 | 40.7516                                     | 200.405               |
| Aug                         | 22.0                                 | 2.661                                          | 98.59                    | 341.61                 | 41.3238                                     | 203.219               |
| Sep                         | 21.375                               | 2.672                                          | 98.99                    | 307.66                 | 37.2169                                     | 183.023               |
| Oct                         | 23.125                               | 2.797                                          | 103.63                   | 252.68                 | 30.5661                                     | 150.316               |
| Nov                         | 21.21                                | 2.651                                          | 98.22                    | 59.11                  | 7.3888                                      | 36.336                |
| Dec                         | 19.625                               | 2.374                                          | 87.96                    | 2.46                   | 0.2976                                      | 1.464                 |
| Total                       |                                      | 32.389                                         | 1200.0                   | 2000.54                | 244.0154                                    | 1200.0                |

Source: Computed by the Author  
 (1) Calendar Month  
 (2) Monthly mean temperature  
 (3) Mean temperature Adjusted for 30-day month



- (3a) Temperature annual mean  $32.389/12 = 2.6991$
- (4) Index of temperature =  $(3/3a) \times 100$
- (5) Monthly average rainfall
- (6) Average rainfall adjusted for 30-day month
- (6a) Rainfall annual mean =  $244.0154/12 = 20.3346$
- (7) Index of Rainfall =  $(6/6a) \times 100$

The monthly index analysis of temperature in Table1 indicates that February - June are relatively high with a peak in June . This implies that the month of June accounts for the highest ambient temperature(108.26% °C) in Asaba, followed by April(107.67% °C) and the lowest occurring in January (83.47% °C). The monthly index of rainfall indicates high precipitation from June – September with the highest peak in August and December accounting for the driest month.

**Table2. Monthly indices of Humidity and Reported diarrhoea Cases in Asaba, Delta State**

| <i>Month Of Reported Cases (1)</i> | <i>Mean Humidity (2)</i> | <i>Mean Humidity Adjusted for 30-day month (3)</i> | <i>Index of Humidity (4)</i> | <i>Mean Diarrhoea (25)</i> | <i>Mean Diarrhoea adjusted for 30-day month (6)</i> | <i>Index of Diarrhoea (7)</i> |
|------------------------------------|--------------------------|----------------------------------------------------|------------------------------|----------------------------|-----------------------------------------------------|-------------------------------|
| Jan                                | 64.875                   | 7.848                                              | 82.490                       | 46.625                     | 5.640                                               | 100.734                       |
| Feb                                | 65.875                   | 8.630                                              | 90.709                       | 50.375                     | 6.599                                               | 117.862                       |
| Mar                                | 76.125                   | 9.209                                              | 96.795                       | 50.375                     | 6.094                                               | 108.843                       |
| Apr                                | 78.0                     | 9.75                                               | 102.482                      | 38.5                       | 4.813                                               | 85.963                        |
| May                                | 79.375                   | 9.602                                              | 100.926                      | 46.625                     | 5.640                                               | 100.734                       |
| Jun                                | 84.875                   | 10.609                                             | 111.511                      | 42.875                     | 5.359                                               | 95.715                        |
| Jul                                | 87.375                   | 10.570                                             | 111.101                      | 54.0                       | 6.532                                               | 116.666                       |
| Aug                                | 86.0                     | 10.403                                             | 109.345                      | 57.125                     | 6.910                                               | 123.417                       |
| Sep                                | 88.375                   | 11.047                                             | 116.114                      | 46.125                     | 5.766                                               | 102.985                       |
| Oct                                | 75.0                     | 9.073                                              | 95.366                       | 41.375                     | 5.005                                               | 89.393                        |
| Nov                                | 76.625                   | 9.578                                              | 100.674                      | 48.375                     | 6.047                                               | 108.003                       |
| Dec                                | 64.875                   | 7.848                                              | 82.490                       | 23.0                       | 2.782                                               | 49.688                        |
| Total                              |                          | 114.167                                            | 1200.0                       |                            | 67.187                                              | 1200.0                        |

Source: Computed by the Author

- (1) Calendar Month
- (2) Monthly mean humidity
- (3) Mean humidity Adjusted for 30-day month
- (3a) Humidity annual mean  $114.167/12 = 9.5139$
- (4) Index of Humidity =  $(3/3a) \times 100$
- (5) Monthly Diarrhoea rainfall
- (6) Average Diarrhoea adjusted for 30-day month
- (6a) Diarrhoea annual mean =  $67.187/12 = 5.5989$
- (7) Index of Diarrhoea =  $(6/6a) \times 100$

The monthly index of humidity in Table2 shows that June to September are mostly wet with a peak in September while December and January account for the driest months (lowest humid months). Noticeably, the period of high humidity are also the period of high rainy months in Asaba . the monthly indices of Diarrhoea indicates a highest index in August and a lowest index in December and also observably high in the first quarter of the year.



**Table3. Monthly indices of Reported Malaria and Pneumonia Cases in Asaba, Delta State**

| <i>Month of Reported Cases (1)</i> | <i>Mean Malaria (2)</i> | <i>Mean Malaria Adjusted for 30-day month (3)</i> | <i>Index of Malaria (4)</i> | <i>Mean Pneumonia (5)</i> | <i>Mean Pneumonia adjusted for 30-day month (6)</i> | <i>Index of Pneumonia (7)</i> |
|------------------------------------|-------------------------|---------------------------------------------------|-----------------------------|---------------------------|-----------------------------------------------------|-------------------------------|
| Jan                                | 531.875                 | 64.34                                             | 102.935                     | 7.10                      | 0.847                                               | 38.451                        |
| Feb                                | 350.375                 | 45.901                                            | 73.435                      | 9.0                       | 1.179                                               | 53.523                        |
| Mar                                | 402.75                  | 48.720                                            | 77.945                      | 11.125                    | 1.346                                               | 61.104                        |
| Apr                                | 378.5                   | 47.313                                            | 75.694                      | 12.5                      | 1.563                                               | 70.955                        |
| May                                | 491.625                 | 59.395                                            | 95.024                      | 20.625                    | 2.419                                               | 109.815                       |
| Jun                                | 614.0                   | 76.75                                             | 122.789                     | 21.625                    | 2.703                                               | 122.707                       |
| Jul                                | 708.75                  | 85.736                                            | 137.166                     | 32.125                    | 3.871                                               | 175.731                       |
| Aug                                | 836.875                 | 101.235                                           | 161.962                     | 33.875                    | 4.098                                               | 186.036                       |
| Sep                                | 640.125                 | 80.016                                            | 128.015                     | 26.25                     | 3.281                                               | 148.947                       |
| Oct                                | 490.625                 | 59.35                                             | 94.952                      | 15.625                    | 1.890                                               | 85.800                        |
| Nov                                | 364.5                   | 45.563                                            | 72.895                      | 15.25                     | 1.906                                               | 86.526                        |
| Dec                                | 295.5                   | 35.746                                            | 57.189                      | 11.0                      | 1.331                                               | 60.423                        |
| Total                              |                         | 750.065                                           | 1200.0                      |                           | 26.434                                              | 1200.0                        |

Source: Computed by the Author

- (1) Calendar Month
- (2) Monthly mean Malaria
- (3) Mean Malaria Adjusted for 30-day month
- (3a) Malaria annual mean  $750.065/12 = 12.5054$
- (4) Index of Malaria =  $(3/3a) \times 100$
- (5) Monthly Pneumonia rainfall
- (6) Average Pneumonia adjusted for 30-day month
- (6a) Pneumonia annual mean =  $26.434/12 = 2.2028$
- (7) Index of Pneumonia =  $(6/6a) \times 100$

The monthly index of malaria in Table 3 above shows high index from June – September with a peak in August. The month of December has the smallest index of occurrence. Pneumonia also shows a high index in the month of May – September with a peak in August and a nadir in January.

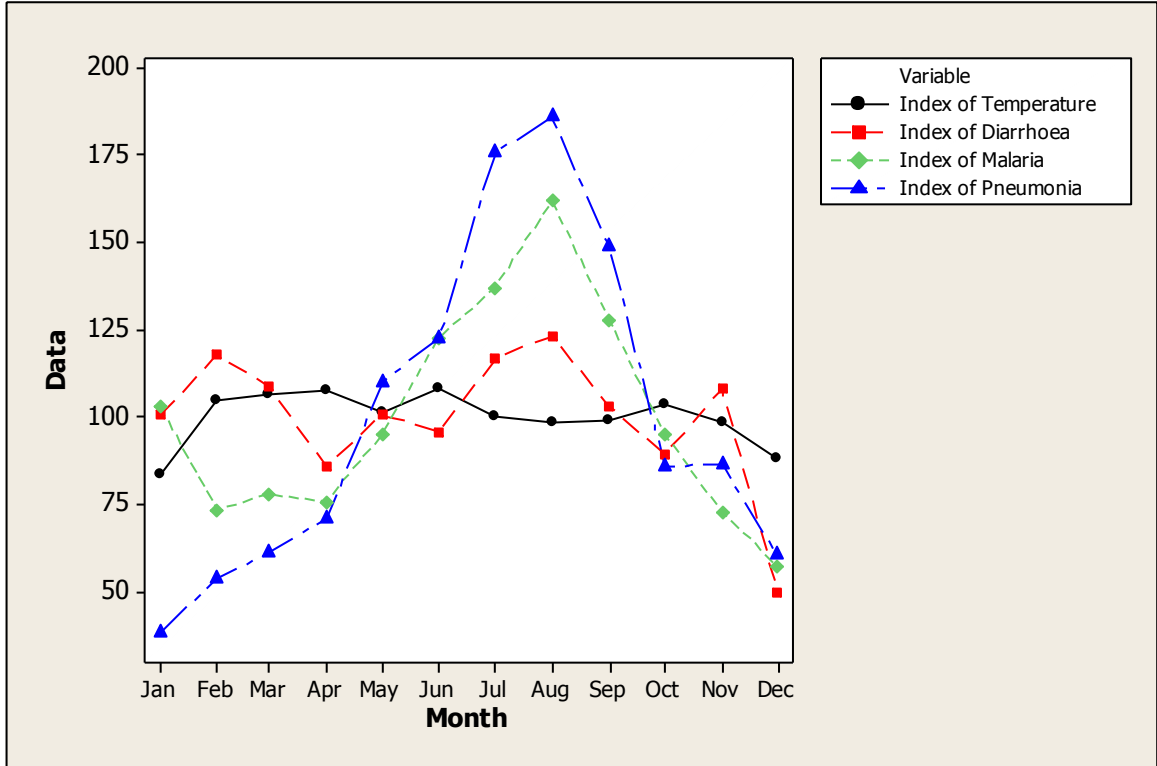


Figure1. Time plot of temperature relative to Diarrhoea, Malaria and Pneumonia in Asaba

The time plot of temperature relative to Diarrhoea, Malaria and Pneumonia in Figure1 reveals that when the temperature index was averagely 98.59, Diarrhoea, Malaria and Pneumonia indices were at their peaks respectively. These three diseases showed very high frequency in the months; June – September with the highest index occurring in August.

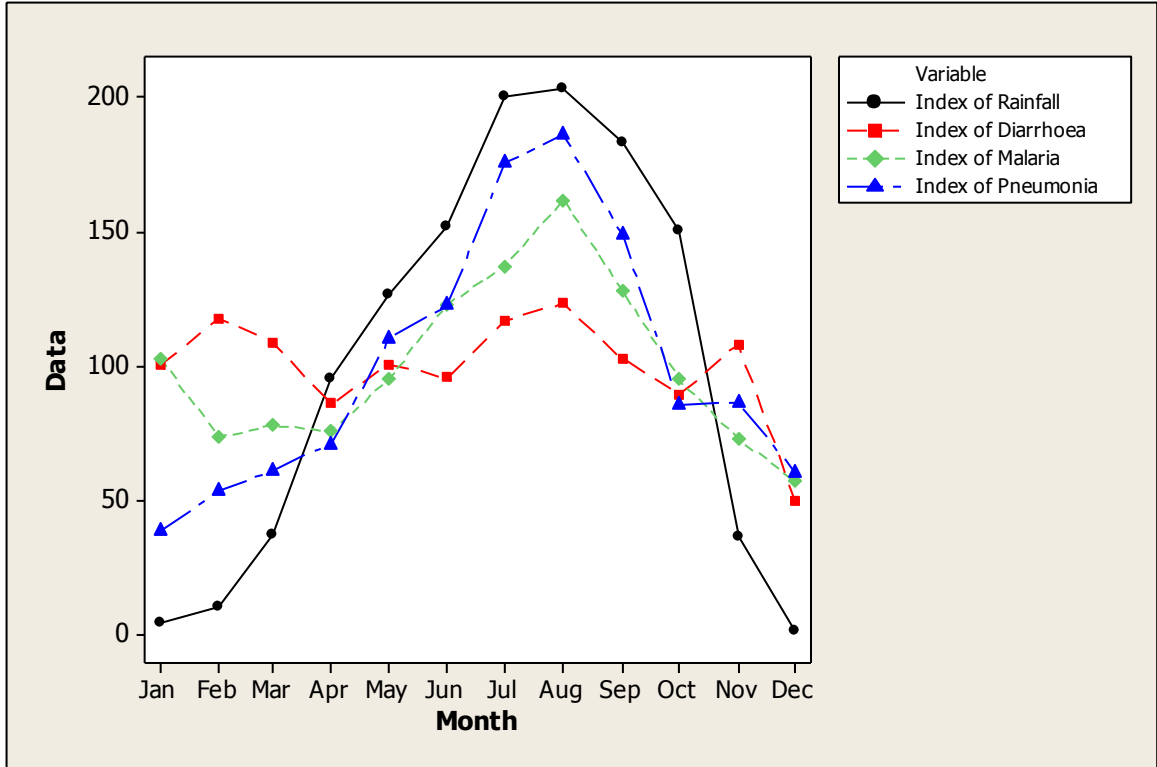
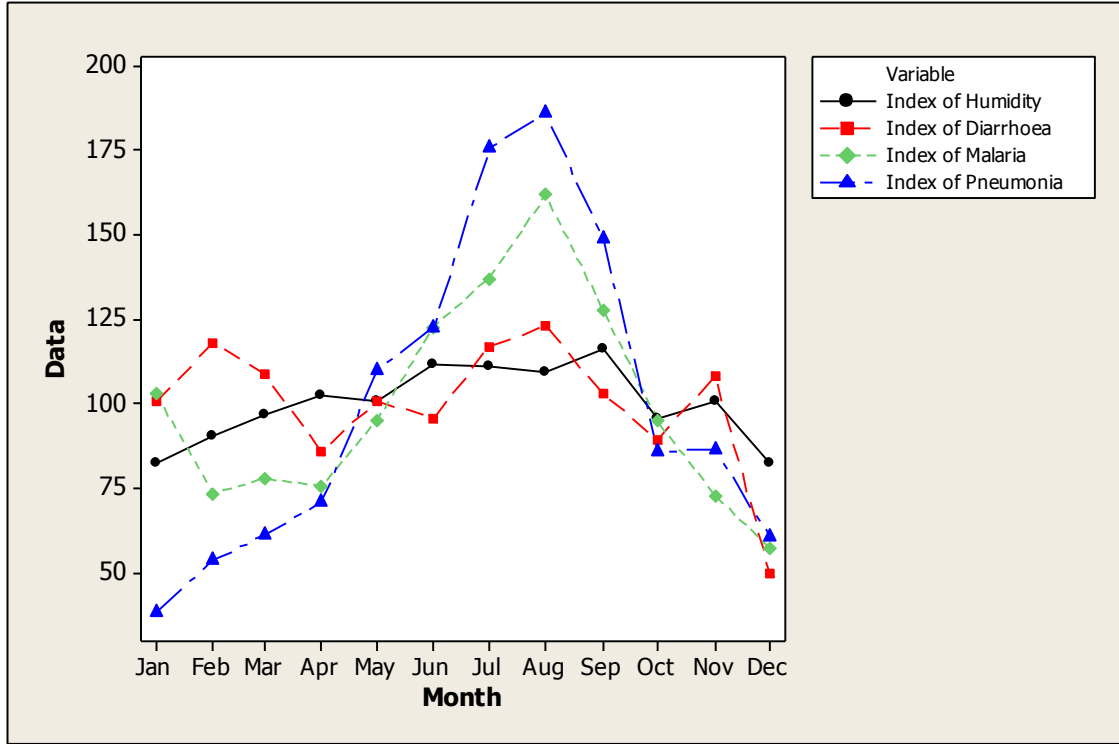


Figure2. Time plot of Rainfall relative to Diarrhoea, Malaria and Pneumonia in Asaba



The time plot of rainfall relative to Diarrhoea, Malaria and Pneumonia in Figure2 reveals that when the rainfall index was at its peak, Diarrhoea, Malaria and Pneumonia indices were at their peaks respectively. It is observable that these three diseases showed a direct relationship with rainfall pattern; as rainfall increases there is a rise in frequencies of the diseases and as rainfall drops there is a drop in the frequency of these diseases( or their report index). At the peak of the wet month(August), the index reports of Diarrhoea, Malaria and Pneumonia attend their peak.



**Figure3. Time plot of Humidity relative to Diarrhoea, Malaria and Pneumonia in Asaba**

In Figure 3, the index of humidity is highest during the rainy months (June – September) within which the indices of Diarrhoea, Malaria and Pneumonia are also very high. These figures1-3 generally indicates that Diarrhoea, Malaria and Pneumonia are more prevalent in the wet seasons more than the dry or drought months.

**3.2 Testing for Seasonal Variation**

The null hypothesis that there is no seasonal effect (seasonal variation) in the cases of Diarrhoea, Malaria and Pneumonia are carried out using Chi-Square test of homogeneity. In doing so, we divide the monthly indices of Diarrhoea, Malaria and Pneumonia into four quarterly means and test the null hypothesis that the quarterly means are the same.

**3.3 Analysis of Chi-Square Test of Homogeneity**

The Chi-Square Goodness Test of homogeneity for observed quarterly counts in Diarrhoea, Malaria and Pneumonia cases is used to test the hypothesis that there is no difference in the quarterly means (i.e no seasonal variation) are presented in Table 4-6 below;

**Table4. Chi-Square Test of Homogeneity for Observed Counts in Diarrhoea**

| Category | Test     |            |          | Contribution to Chi-Sq |
|----------|----------|------------|----------|------------------------|
|          | Observed | Proportion | Expected |                        |
| 1        | 109.146  | 0.25       | 100.000  | 0.83646                |
| 2        | 94.137   | 0.25       | 100.000  | 0.34373                |
| 3        | 114.356  | 0.25       | 100.000  | 2.06090                |
| 4        | 82.361   | 0.25       | 100.000  | 3.11128                |
|          | N        | DF         | Chi-Sq   | P-Value                |
|          | 400.001  | 3          | 6.35236  | 0.096                  |



The Chi-Square Test of Homogeneity for observed counts in Diarrhoea cases as shown in Table4 above indicates that the null hypothesis of no seasonal variation in the incidence of Diarrhoea, cannot be rejected. The Chi-Square value is not significant under 5% level as p-value (0.098) is greater than 5% level of significance and the calculated Chi-Square value (6.3524) is less than the table value (7.815). This result implies that there is no difference in the quarterly means. Hence, there is no seasonality in the occurrence of diarrhoea in Asaba.

**Table5. Chi-Square Test of Homogeneity for Observed Counts in Malaria**

| Category | Test     |            | Contribution |           |         |
|----------|----------|------------|--------------|-----------|---------|
|          | Observed | Proportion | Expected     | to Chi-Sq |         |
| 1        | 84.772   | 0.25       | 99.9168      | 2.2956    |         |
| 2        | 97.836   | 0.25       | 99.9168      | 0.0433    |         |
| 3        | 142.381  | 0.25       | 99.9168      | 18.0471   |         |
| 4        | 74.679   | 0.25       | 99.9168      | 6.3749    |         |
|          |          | N          | DF           | Chi-Sq    | P-Value |
|          |          | 399.667    | 3            | 26.7611   | 0.000   |

In Table 5, the Chi-Square Test of Homogeneity for observed counts in Malaria cases indicates that the null hypothesis of no seasonal variation in the incidence of malaria is rejected in favour of the alternative. The Chi-Square value is significant under 5% level as p-value (0.000) is less than 5% level of significance and the calculated Chi-Square value (26.7611) is greater than the table value (7.815). This result implies that there is difference in the quarterly means. Hence, there is seasonal variation in the occurrence of Malaria in Asaba.

**Table6. Chi-Square Test of Homogeneity for Observed Counts in Variable: Pneumonia**

| Category | Test     |            | Contribution |           |         |
|----------|----------|------------|--------------|-----------|---------|
|          | Observed | Proportion | Expected     | to Chi-Sq |         |
| 1        | 51.026   | 0.25       | 100.001      | 23.9856   |         |
| 2        | 101.159  | 0.25       | 100.001      | 0.0134    |         |
| 3        | 170.238  | 0.25       | 100.001      | 49.3309   |         |
| 4        | 77.583   | 0.25       | 100.001      | 5.0258    |         |
|          |          | N          | DF           | Chi-Sq    | P-Value |
|          |          | 400.006    | 3            | 78.3558   | 0.000   |

In Table 6, the Chi-Square Test of Homogeneity for observed counts in Pneumonia cases indicates that the null hypothesis of no seasonal variation in the incidence of Pneumonia in Asaba is rejected in favour of the alternative. The Chi-Square value is significant under 5% level as p-value (0.000) is less than 5% level of significance and the calculated Chi-Square value (78.3558) is greater than the table value (7.815). This result implies that there is difference in the quarterly means. Hence, there is seasonality in the occurrence of Pneumonia in Asaba.



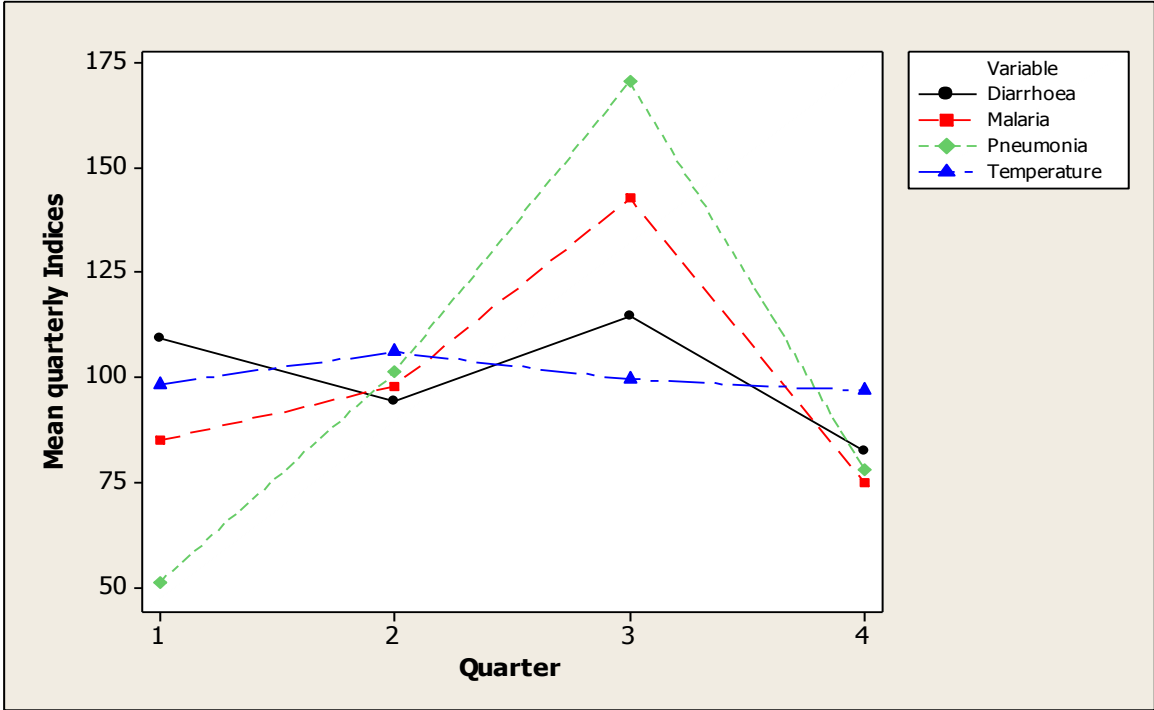


Figure4. Quarterly variation of Diarrhoea, Malaria and Pneumonia relative to Temperature in Asaba

The quarterly variation of diarrhoea, malaria and pneumonia relative to temperature as shown in Figure4 above indicates that Pneumonia and malaria are most prevalence in the third quarter (July-September) when temperature is low.

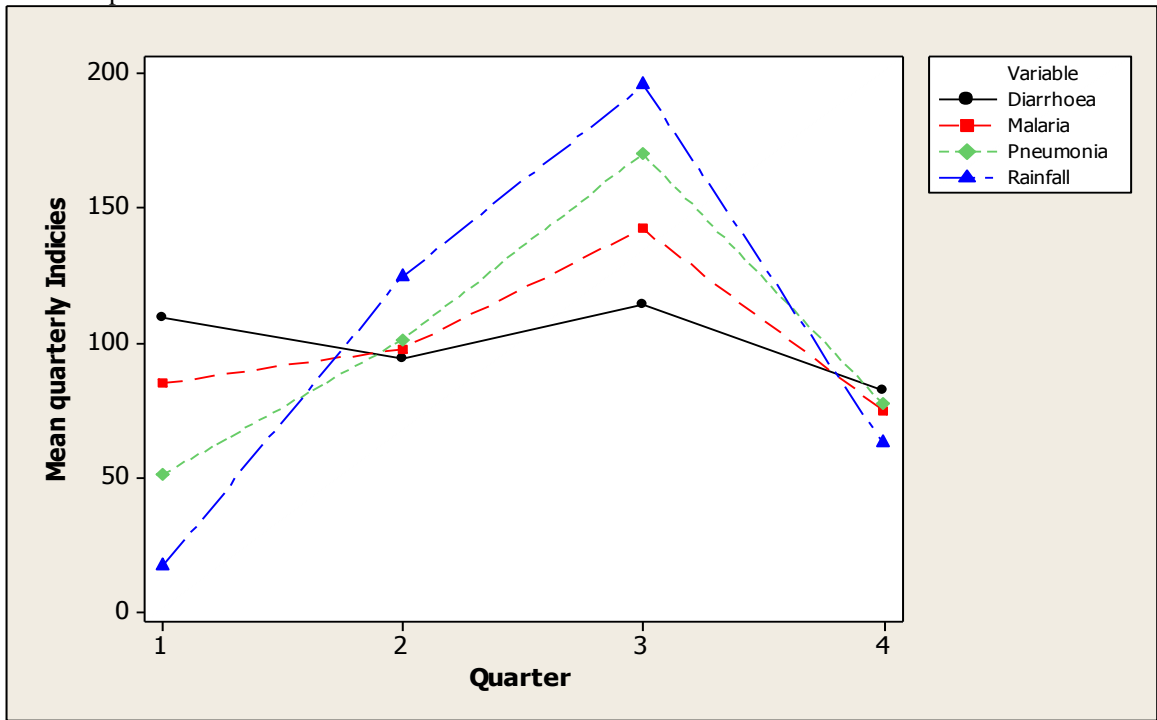


Figure5. Quarterly variation of Diarrhoea, Malaria and Pneumonia relative to Rainfall in Asaba

The quarterly variation of diarrhoea, malaria and pneumonia relative to rainfall as shown in Figure4 indicates that Pneumonia and malaria are most prevalence in the third quarter (July-September) when rainfall is at its peak.

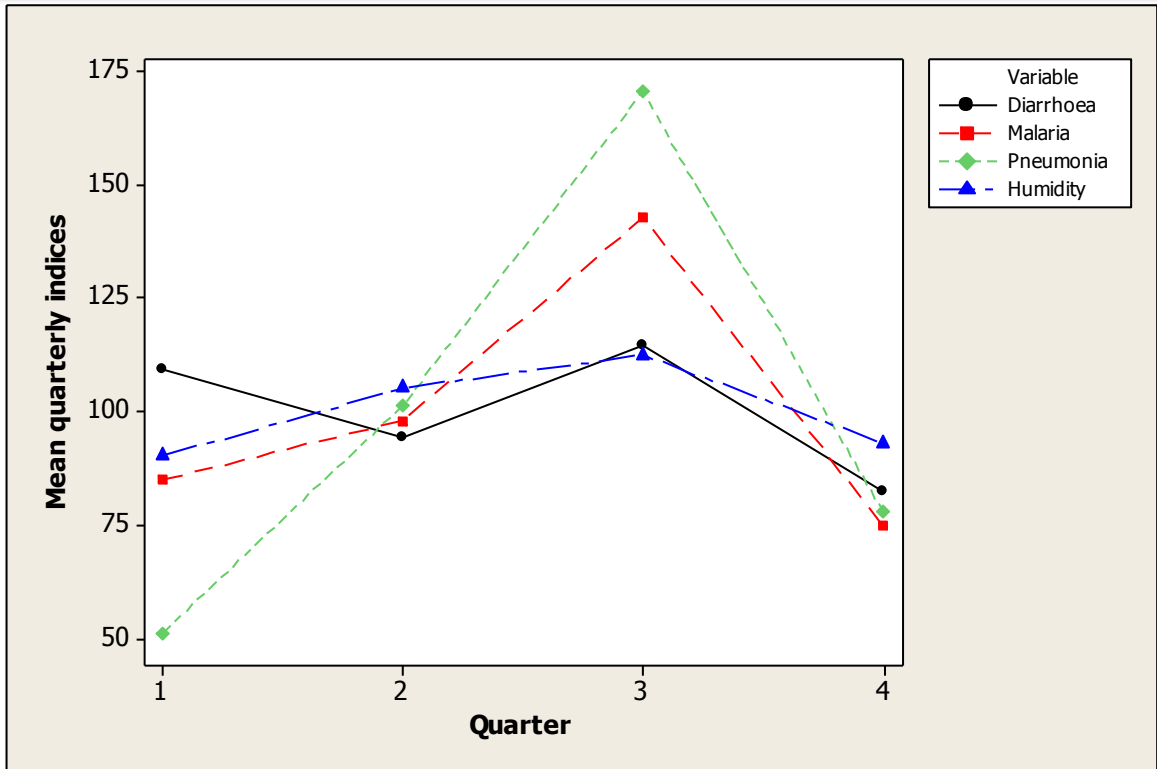


Figure6. Quarterly variation of Diarrhoea, Malaria and Pneumonia relative to Humidity in Asaba

The Figure6 indicated that Pneumonia and malaria are most prevalence when humidity is relatively high in the third quarter (July-September).

3.4 Discussion of Results

The time plot of monthly indices climatic factors relative to Diarrhoea, malaria and Pneumonia in Figure 1-3 generally indicate that the prevalence of the diseases are very high at the peak of rainy season (July-September) especially August , when humidity is relatively high and temperature is low.

Again, a quarterly plot of the diseases as shown in Figure4-6 indicate that the highest incidence of these three diseases occur in the second quarter (Q3), more critical for Pneumonia and Malaria than Diarrhoea. This finding is in line with that of Rahman et al., (2011) for Chittagong hill tract districts of Bangladesh. The finding that malaria is most prevalence within the rainy season and when temperature is low in Asaba is consistent with that of Dicko et al., (2005) for Mali, Koram et al.,(2003) for Northern Ghana and Amaefula (2010) for North-Western Nigeria.

The Chi-Square test of homogeneity for observed counts in diarrhoea, malaria and pneumonia cases as shown in Table4-6 above indicate the following; the null hypothesis of no seasonal variation in the incidence of diarrhoea in Asaba, cannot be rejected, implying that observed count in diarrhoea cases does not follow seasonal occurrence. The results in Table 5 and Table6 showed that the null hypothesis of no seasonal variation in the incidences of malaria and Pneumonia were rejected in favour of the alternative, hence the observed counts in malaria and Pneumonia cases follow seasonal occurrence.

4. CONCLUSION

On the basis of the empirical findings, malaria and pneumonia incidences have seasonal occurrences and most prevalence during the rainy season (July-September) or third quarter of the year when temperature is low and humidity is relatively high. Diarrhoea seems not to have seasonal effect but it's fairly high in the first and third quarters of the year. Hence, the study could be useful to the government and stake holders in the health sector for the diseases study, control and surveillance.

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# SIGNIFICANCE OF USING VIDEO FILMS IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

Djumambetova Gulziba Kongratbayevna

*Trainee – Teacher, English Language and Literature department  
Karakalpak State University, Nukus, Karakalpakstan, Uzbekistan*

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## ABSTRACT

*The article deals with the importance of using video films in teaching English as a foreign language (EFL). In this article, it is described that videos help students to memorize new words or a new topic during the classes. Descriptive methods analyses are used in this article. The article gives information about the advantages and disadvantages of using different methods in the process of teaching EFL. Also, in the article, it is described that video materials in the classroom can help to solve several problems and form a stable positive motivation of students in the learning process.*

**KEY WORDS:** *English as a foreign language, Karakalpak language, approach, videos, films, teaching, learning.*

## INTRODUCTION

Videos in English are one of the means by which you can diversify educational materials in English language, improve the skill of listening to oral English speech, and replenish students' vocabulary with new words and expressions of colloquial English. Studying English on their own or attending English courses, students try to achieve one goal - to learn to understand by ear and speak. Also, understanding English by ear sometimes turns out to be not such an easy task, not only for beginners to learn the language, but also for listeners of a higher level. Listening to a Karakalpak-speaking teacher, everything seems to be clear. But as soon as a native English speaker or an English-speaking representative of another nationality begins to speak, problems might arise with the perception of English speech. To solve this problem, films in English are used as an aid. There are several categories of films in English, each with its own advantages as a teaching medium, they are as in the following:

1. Educational films in English. This category includes specially designed films on topics, speech of the characters of these films is adapted in terms of vocabulary and speed to a certain level of students who are learning English as a foreign language. The choice of one or another subject of the film in English allows teachers to make the lesson more focused. The same category includes video lessons in English with videos on a specific topic to

consolidate a particular topic in grammar, vocabulary or phonetics [5, p. 31];

2. Documentary films in English. These films also have a specific theme, but they might not be adapted to any level of the listener;

3. Feature films in English. These films can be used as educational films for a wide range of listeners, since they do not have any highly specialized topics and special vocabulary. A positive aspect of using films in English is listening to spoken language in American, British, or some other version of English. If the speech of the actors is too fast or sometimes difficult to understand, you can always put this or that fragment on repeat, and, if necessary, on the slowed down speed of the voice acting. Also, an important point when choosing films in English as teaching material in the initial stages such as the film should not only be interesting, but also well known to the listener. This significantly increases the efficiency of listening comprehension, and success is known to be a good motivator for further learning [4, p. 184]. Another additional feature of films in English may be the presence of a Karakalpak track, which can be used in cases where even slow repetitions of English speech did not give the necessary understanding of a particular phrase;

4. Films in English with subtitles. This is a variation of the English feature film category described above, but it features a subtitle track. As a visual analyzer is the main system of human perception of information, the presence of visual



duplication can help in mastering the English language by ear. Important points in this case should be the synchronization of the subtitle track with the audio track and full lexical correspondence of English speech in the audio and written versions. The simultaneous inclusion of two sensory systems in the process of information perception creates additional associations when memorizing new words or entire linguistic constructions of the English language [4, p. 184].

Thus, if we consider films in English as a teaching tool, we need to be selective depending on the goals and level of the students. The correct selection by the teacher of a particular category of film as a teaching material will make the lesson not only interesting, but also much more effective. A lesson that includes interesting fragments will always be more dynamic and more effective, since several types of human perception systems are included in the work at once. Furthermore, in order to form a stable positive motivation of students in relation to a foreign language, in order to achieve the most optimal level of mastering the educational material, the foreign language teacher should use non-standard forms of work, include new techniques and methods of teaching foreign languages in the teaching process, and turn to new technical teaching aids.

## LITERATURE REVIEW

The State Educational Standard for Foreign Languages provides as the goal of teaching the mastery of foreign language communication at least at the level of elementary communicative competence in speaking, listening, writing, and advanced communicative competence in reading. This approach to teaching a foreign language necessitates prompt and at the same time very high-quality preparation for the functioning of its linguistic means. The level of formation of communicative competencies directly depends on the quality of mastery, including the lexical side of speech activity [2, p. 10]. Vocabulary in the system of language means is the most important a component of speech activity: listening and speaking, reading and writing. This determines its important place in every foreign language lesson, the formation and improvement of lexical skills is constantly in the field of vision of the teacher. The lexical units of the language, along with the grammatical ones, are the initial and necessary building material with the help of which speech activity is carried out, and, therefore, constitute one of the main components of the content of teaching a foreign language [3, p. 252].

## METHODOLOGY

It is advisable not to provoke situations of failure by regulating style, content and time. We can study some approaches in sufficient detail in the

works of E.I. Passova. The most common approaches are as in the following: 1. Aspect approach. The language is divided into three aspects: vocabulary, grammar and phonetics, which are studied separately. The difficulty in using this approach lies in the impossibility of combining the studied sections as a whole; 2. The structured approach involves doing a number of training exercises for setting new vocabulary into already mastered grammatical structures. However, we assume that the disadvantage of this approach is that it does not provide an opportunity to develop the skill of free communication; 3. Transformational approach includes exercises to change the order of words or grammatical forms in accordance with the assignment. This approach can be used only in special cases, for instance, in the grammatical aspect, since it is not effective in other aspects; 4. Aspect-structural approach, in addition to memorizing certain lexical units, grammar requires memorization of speech patterns. This approach deprives teaching of a communicative focus; 5. Situational and thematic approach involves working out lexical materials in real life situations. Difficulties arise due to the deterioration of the grammatical correctness of speech; 6. Subject approach includes the use of literary texts. This approach has more advantages than disadvantages. Analysis of artistic sources allows you to study grammatical structure, new vocabulary, and practice speaking and listening skills. The approaches presented earlier, at this stage in the development of the theory and methodology of teaching a foreign language, are more of a theoretical value than a practical one. Even with a variety of approaches, now teachers are inclined to use the three most optimal, taking into account the development of society and international relations, approach to teaching foreign languages: personality-oriented, socio-cultural and communication-oriented approaches [2, p. 8].

Using video into the learning process changes the nature of the traditional lesson, making it more lively and interesting. Also, the use of video in the classroom helps to expand the general outlook of students, enrich their language stock and regional knowledge. Furthermore, it should be noted that video is not only another source of information. The use of a video film contributes to the development of various aspects of the mental activity of students, and above all, attention and memory. There is an atmosphere in classroom watching joint cognitive activity. In these conditions, even an inattentive student becomes attentive, because in order to understand the content of the film, students need to make some effort. Thus, involuntary attention turns into voluntary, and the intensity of attention affects the memorization process. The use of various channels of information flow has a positive effect on



the strength of capturing regional and linguistic material [4].

## RESULTS AND DISCUSSION

Video films have strong emotional impact on students, influences the formation of a personal attitude to what they see. Also, an advantage of the video is the immediacy of the image of reality, the special manner of communication between the presenter and the audience, the use of close-ups, unobtrusive presentation of information, colorfulness, and the presence of a musical background. When in contact with what is happening on the screen, conditions are created that are most close to natural. Unlike audio or printed text that can have a high informative, educational, educational and developmental value, video text has the advantage that it combines various aspects of the act of speech interaction. In addition to the content side of communication, video text contains visual information about the place of the event, the appearance and non-verbal behavior of communication participants in a specific situation, often due to the specifics of age, gender and psychological characteristics personalities of speakers [5, p. 31].

During the classes, we can offer a video sequence to memorize new words or a new topic in English. Better memorization will be facilitated by showing animals in natural conditions or in a reserve where they are in their natural habitat. This will help students memorize the material faster. For the task describe *the picture*, you can use the *pause* function - to stop the video so that the students can better see the details. By offering listening videos, the teacher should remember that this method works both negatively and positively. In the video, students observe facial expressions and gestures, watch the actions of the speakers, and analyze the emotional coloring of the conversation. They get information about the context from what they see on the screen. Additionally, the combination of these factors can distract the child from the most important task - listening. Therefore, before turning on the video, students need to clearly articulate the task and direct them to complete it. Moreover, Project work, research will offer a video necessary to consolidate the material covered or a cycle of lessons, where a specific topic is considered. This will help to interest the child, help him to take a break from the monotonous presentation of the material. Also, using video materials to find information related to language learning. Such tasks are needed to consolidate, highlight and memorize language material: grammar, phonetics, vocabulary. The content of the exercise is important here - the effectiveness of the lesson depends on it. The

simplest tasks are enough: watch the video, choose the foreign equivalent to the words you heard and, conversely, choose the Russian translation for the foreign language word, insert the missing words, name all the adjectives that were heard paired with a specific noun, write down the verbs in the form in which they sounded on the video, with what intonation they spoke on the screen. Currently, many educators offer audiences to watch videos. In most cases, these videos are educational films, feature films or cartoons, few people share their experience of using documentaries in English lessons. We have developed a set of vocabulary exercises for the students. For this complex, we suggest one of the films of the documentary educational video course *England and the English people*. In it students can learn about the originality the English region, the relationship between England and the world, get acquainted with the peculiarities of the national character of the British, as well as the traditions and originality of the English way of life. Learn what it means to be English and what a traveler needs to know before take a trip to this amazing country. Knowledge of the national culture and traditions of the people, speaking the language you are learning is a prerequisite for successful learning. After all, every word and phrase has been formed for many years. And it is precisely on the basis of the mentality, customs and traditions of the people that English sounds in English, and Karakalpak. Therefore, the language and culture are considered to be inseparable.

## CONCLUSION

Thus, using videos in the classroom helps to solve the following problems: 1) Increased motivation for learning; 2) Intensification of training; 3) Activation of students; 4) Independent work of students; 5) Improving the quality of students' knowledge. There is a huge amount of video materials that can be used in teaching English as a foreign language. It can be commercials or interviews with famous people, cartoons or a plot from world blockbusters, fragments of news and TV shows. In the scientific and methodological literature, there is no strict classification of video materials. On the technical side, a distinction can be made between video recording, such as materials recorded on information carrier, and those that are directly broadcast on the air. Thanks to modern technologies and the Internet, almost any information can be found on the global network and recorded on a carrier [2, p. 10]. Currently, the use and application of video resources is becoming a very popular and effective technique in teaching English to students in higher educational institutions. In order to use the video in a lesson, you need to make sure that: 1) The content of the video materials used corresponds to the level of



general and language readiness of students; 2) The duration of the video fragment used does not exceed the real possibilities of the lesson or lesson stage; 3) Situations of the video clip provide interesting opportunities for the development of linguistic, speech, socio-cultural competence of students; 4) The context has a certain degree of novelty, or surprises; 5) The text of the video is accompanied by clear instructions aimed at solving a specific educational problem, understandable to students and justified by the logic of the lesson [4, p. 184].

However, sometimes teachers complain that while watching a video, students are distracted from the lesson, behave badly, and perceive the beginning of watching as a signal for entertainment. Therefore, situations might be different, but more often such situations arise when the teacher: 1) does not consider real interests and capabilities of students when choosing a video clip; 2) does not clearly explain the purpose of the assignment and how its implementation will be assessed or will affect the course of further work; 3) fails to think over differentiated tasks for their successful implementation; 4) uses video for the first time; 5) is not sure of the necessity and effectiveness of such assignment. Also, educational tasks that can be solved using the video: 1) Repetition of vocabulary and vocabulary expansion. In order to do this, take a video fragment of up to 1 minute, which contains materials on a lexical topic: objects, dialogues, actions. It is desirable that the video sequence is accompanied by music and dubbed in English. You can take a video clip with text in your native language by turning off the sound; 2) The class is divided into pairs or small groups, and assignments are given to each. They can be repeated, they do not have to be radically different; 3) Students watch videos showing objects and phenomena. Then they discuss what they saw among themselves. To make things easier, they can use a dictionary or ask a teacher with questions; 4) For example: What is this person's profession? Name this animal. Where are the items in red? 5) Then the students give answers to the teacher's questions. At the same time, the teacher says that the video will be shown again so that the students can find their mistakes; 6) Everyone watches the video a second time and analyzes their mistakes.

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# AUTHENTIC MATERIALS AS A MEANS OF DEVELOPING VOCABULARY IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

**Urazbaeva Dilbar Turdibaevna**

*Senior Teacher, Foreign Languages Department,  
Nukus State Pedagogical Institute, Nukus, Uzbekistan, Karakalpakstan*

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## ABSTRACT

*The article deals with the importance of using authentic materials in teaching English as a foreign language (EFL) in the classroom of Karakalpak students. Also, the article assumptions given by the researchers have been analyzed. The article gives information about the usage of the materials from textbooks specially for learning EFL in the classroom, or whether there is a need to use authentic materials to develop and improve students' speaking skills, especially to increase their vocabulary. The descriptive analysis method has been used to show the effectiveness of game method and its advantages, limitations as well.*

**KEY WORDS:** *English as a foreign language (EFL), education, authentic materials, language learning, teaching.*

## INTRODUCTION

Teaching foreign languages in institutions of higher education involves mastering various types and skills of reading texts of different styles and genres. In addition, optional reading classes are an important part of the English language teaching system, are closely related to the main course and its goals and content, expand and deepen it. Preparing students for the use of a foreign language in real situations of everyday and professional life is considered as a significant goal of modern foreign language teachers. In this case, in 13.00.00 Pedagogical sciences, teachers are searching of suitable teaching materials that can be effective in teaching English as a foreign language (EFL). Therefore, teachers assume that the fact whether it is enough to use materials from textbooks specially for learning EFL in the classroom, or whether there is a need to use authentic materials to develop and improve students' speaking skills, especially to increase their vocabulary skills. According to D. Nunan, authentic materials are information in oral or written form, which is created in the process of natural communication, and not specifically for use in language learning [2, p. 54]. These are original texts that were not created for pedagogical purposes. Considering expediency of using H. Widowson

notes, when learning a language, it is necessary to use simplified materials in the classroom in order to facilitate the perception and assimilation of the language. However, it is currently recommended that the materials be authentic [6].

## LITERATURE REVIEW

According to Professor D. Larsen-Freeman, authentic materials are an integral part of language learning [1]. If the authentic materials used in teaching a foreign language are related to the topic of the direction and profile of training, then the motivation of students to learn a foreign language increases. Authentic content is more effective, interesting and challenging [4]. Furthermore, they can immerse students in the culture of the target language. Inauthentic texts mainly focus on the information that the language teacher plans to teach students, and often contain ideally formulated sentences, to correct structure, interrogative sentences, and correct detailed answers. Specially edited lexical and grammatical structures of sentences make EFL in inauthentic texts little similar to the one that students encounter in communication and which they will have to use in real life situations. The adapted texts are suitable for practicing the learned vocabulary and grammar, but they are



ineffective for improving reading skills, one of the main skills in learning a foreign language. Experts identified the main reasons that determine the need to use authentic materials in the foreign language classroom:

- With the help of authentic materials, students learn the foreign language for real communication;

- Authentic materials meet the interests of students and make a positive impact on the motivation of students;

- Teaching efficiency increases;

- Authentic materials introduce students to the culture of the target language [5, p. 144].

Also, authentic materials help bridge the gap between the language taught in the classroom and the foreign language in which people communicate in various real-life situations. Authentic texts are essential language learning materials for students that they want to understand while traveling, studying abroad, participating in international conferences, or other situations that require the use of the language. Taking the fact into consideration that authentic texts are created not for the purpose of learning a language, but for completely different purposes, it is necessary to correctly select authentic texts for teaching the foreign language. As a source of real language, authentic materials can be inappropriate to study and contribute to a decrease in student motivation to learn EFL. Materials can be original texts taken from newspapers, magazines, television programs, films, songs and literary works. Also, materials from the Internet are often used that provides a different approach to reading. From a practical point of view, the Internet as a modern reality is accessible to most students and teachers and can provide access to an endless amount of materials.

## METHODOLOGY

Authentic materials will create an opportunity for the students to communicate in a lively colloquial language, rather than formal, specially worded phrases. When we choose materials from various sources, we should take into consideration that the purpose of reading them should be to understand the meaning, and not the form of presentation, especially when using the texts of literary works. K. Nuttall distinguishes three main criteria for the selection of texts as materials for the lesson: the relevance (appropriateness) of the content, the possibility of using the text in the lesson and the presentation available for reading [3]. The ability to use text in the classroom implies options for working with the text in order to develop students' vocabulary. Text that does not correspond to the purpose and objectives of the lesson will be useless in teaching. Texts that do not correspond to the

purpose and objectives of the lesson might be useless in teaching.

For effective teaching EFL in optional classes, it is important to select and organize texts and a targeted set of exercises and tasks to develop students' vocabulary and abilities. Students are offered exercises and tasks for teaching vocabulary and reading, which are adequate means of forming reading as an activity, a process and the development of their own reading skills [8, p. 48]. Methodological recommendations will provide for the improvement of communicative skills of vocabulary reading texts in English on programmatic topics, allowing students to navigate in the text, taking into account its specifics and in accordance with the communicative task, to extract information with varying degrees of completeness and depth, use compensatory skills (use: linguistic and contextual guess; dictionaries and various types of reference literature; illustrative and pictorial support) [7, p. 142].

## RESULTS AND DISCUSSION

Vocabulary in the system of linguistic means is the most important component of speech activity such as listening and speaking, reading and writing. Therefore, this determines its important place in every foreign language lesson, the formation and improvement of lexical skills is constantly in the field of vision of the teacher. Lexical units of the language, grammatical ones are the initial and necessary building material with the help of which speech activity is carried out, and, therefore, constitute one of the main components of the content of teaching a foreign language [9, p. 252]. Moreover, in higher education institutions, we can observe the following picture: learned students in the first year of teaching a foreign language 200-250 words and actively used by them in oral speech, at the subsequent stages are forgotten - the vocabulary of students not only does not grow, but even decreases. All this is expressed in the fact that in monologue and dialogical speech, students use monotonous vocabulary, and therefore speech looks unnatural, devoid of lexical variability, due flexibility, which does not correspond to the age of the students and the accepted norms of communication.

The number of words in the foreign language is enormous. The painstaking work required for the assimilation of each word is either not carried out at all, or it covers such vocabulary that is not used in the future in speech, and therefore is forgotten. In order to achieve the assimilation of the vocabulary of a foreign language by students, without which neither expression nor understanding of the content of speech is possible, thoughtful work is needed on such lexical units that are necessary for the development of speech activity. There are a number of important points to consider here. Furthermore, it is related to



the personality of the teacher, his professional qualities. Depending on how interesting it will be planned by the teacher work in this direction depends on students' desire to enrich his vocabulary, the desire to speak a foreign language. The volume of the vocabulary of students, the coefficient of its efficiency in the assimilation of the material is directly proportional to the teacher's creative output, his professional competence. As an effective way of teaching vocabulary in English lessons is the play method. In the form of play activities, we can always easily and quickly explain some materials, work out difficult moments, decorate the boring routine daily study, and also interest students in learning English. This sharpens the thinking activity of students. It is in play that children learn social functions and norms of behavior. Play, as Vygotsky said, leads development. The significance of play is inherent in its very nature, for play is always good emotions, and where there are emotions, there is activity, there is attention and imagination, respectively, thinking works there.

## CONCLUSION

Thus, passive vocabulary should also be introduced in an oral story (or in separate sentences), but possibly in the form of separate lexical units isolated from the context. The disclosure of meaning and explanation are combined in this case. Also, it is necessary to explain the features of the sound and graphic form of a word, the volume of meaning, shades of meaning, grammatical forms that deviate from the rules. Just as with the introduction of units of active stock, when working on a passive stock, the stage of consolidating the sound and graphic forms, pronouncing new words, reading them aloud is required. Vocabulary exercises for passive stock are not very varied. This is a choice from the text (or a separate sentence) of words of a certain meaning, the translation of sentences with new or homonymous words into the native language when reading or hearing. The main speech reinforcement of passive vocabulary occurs in the process listening and reading. Without reading a variety of texts, built mainly on the passed vocabulary, the accumulation of lexical stock is impossible. We should not abandon such a way of consolidating vocabulary, as maintaining students' own dictionaries. Therefore, we assume that when studying EFL vocabulary, it is necessary to use all the above methods and techniques in a complex. In this case, high results are achieved in assimilation vocabulary, speech skills are formed and students' interest in the subject English will develop.

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# IMPACTS OF SAQ TRAINING ON SELECTED PHYSIOLOGICAL VARIABLES AMONG FOOTBALLERS

V. Kumaravel<sup>1</sup>, Dr.P. Sridar<sup>2\*</sup>

<sup>1</sup>Ph.D. Research Scholar, (Part Time) Department of Physical Education, Government Arts and Science College, (Affiliated to Bharathiar University, Coimbatore) Modakkurichi, Erode, Tamilnadu, India.

<sup>2\*</sup>Director of Physical Education, Government Arts and Science College, Modakkurichi, Erode, (Affiliated to Bharathiar University, Coimbatore), Tamilnadu, India.

## ABSTRACT

Speed, agility, and quickness (S.A.Q.) training has become a popular way to train athletes. For the present study, ninety six players were selected as samples from the qualified teams for the pre-quarter final in the Anna University, Salem in the academic year 2017– 2018. Finally forty football players were randomly selected as subjects for the present study. They were divided into two equal groups. Each group consists of 20 subjects. The age of subjects were ranged from 18-25 years. The researcher had been selected the following variables for the present study: physiological variables namely heart rate, systolic blood pressure and diastolic blood pressure. The data was collected before and after twelve weeks of training. The collected data was analyzed by using t-test and applying Analysis of Covariance (ANCOVA) Technique. The level of significance was fixed at 0.05. The findings of the present study have strongly indicates that 12 weeks of S.A.Q. training have significant effect on selected physiological variables i.e., heart rate, systolic blood pressure and diastolic blood pressure of football players.

**KEY WORDS:** Speed, Agility, Quickness, Heart rate, Blood Pressure, Football.

## 1. INTRODUCTION

Soccer requires players to perform numerous actions that require strength, power, speed, agility, balance, stability, flexibility and endurance (Bloomfield et al., 2007; Gorostiaga et al., 2004; Helgerud et al., 2001) suggesting that the physical conditioning of players is a complex process. During a soccer match, players cover about 10 km in total, which includes a sprint every 90 seconds (11% of overall activity) with each action lasting on average of 2 to 4 seconds and covering a distance of 15 m (Stolen et al., 2005). Although speed represents a very important component of fitness for a soccer player, quickness (acceleration speed during the first steps) is probably more important. This is because sprints in soccer are mainly performed over short distances undertaken at maximal intensity although the longest distances tend to be about 40 m and usually involves several changes in direction (Jovanovic et al., 2011; Rienzi et al., 2000).

Yap & Brown, (2000) defined speed as “the rapidity of movement”. Agility is the rapid whole body movement with change of velocity or direction in response to a stimulus (Sheppard & Young, 2006).

Lee et.al. (1980) defined quickness as “the ability to read and react to a situation; it is a multidirectional skill that combines explosiveness, creativeness, and acceleration” (Yap & Brown, 2000). SAQ aims to coach the necessary techniques to provide the basic skill to complete the movements.

## 2. METHODOLOGY

For the purpose of the present study, ninety six players were selected as samples from the qualified teams for the pre-quarter final in the Anna University, Salem in the academic year 2016 – 2017. Finally forty football players were randomly selected as subjects for the present study. They were divided into two equal groups. Each group consists of 20 subjects. Group - I was underwent to SAQ training (SAQT), Group – II acted as control group. They didn't undergo for any specific training programme. The age of subjects were ranged from 18-25 years. The researcher had been selected the following variables for the present study: physiological variables i.e., heart rate, systolic blood pressure and diastolic blood pressure of variables. The selected variables were assessed by using standardized test.



The data was collected before and after twelve weeks of training. The collected data was analyzed by using t-test and applying Analysis of Covariance (ANCOVA) Technique. The level of significance was fixed at 0.05.

### 3. EXPERIMENTAL DESIGN

For the present study pre test – post test randomized group design was used.

### 4. TRAINING PROCEDURE

The data will be taken for both the groups before and after the experimental period of twelve weeks. After the initial measurements the specially designed training programme was given to the subjects of the experimental group named as SAQ (speed, agility and quickness) training. The training for experimental groups was administrated at Knowledge Institute of Technology ground, Salem. The training sessions were conducted three days a week i.e. (Monday, Wednesday, and Friday) over a period of twelve weeks. Each experimental session was of 30-45 minutes duration with excluding warm-up and warm-down. The training commenced with one week of general physical conditioning for the experimental groups, so that the subjects were ready physically and mentally to take on specific load administrated to them for the purpose of the study. After one week of conditioning the training was administrated to the experimental groups, which include speed, agility, and quickness drills respectively for three days in a week i.e. (Monday,

Wednesday, and Friday). A week schedule was repeated to the proceeding week and the load was adjusted progressively. A detail program is appended. The procedure adopted for the adjustment of load is as follows: The load intensity was kept low to moderate in first week and increased progressively in proceeding week moderate to high. The frequency of training was thrice in a week. The density was adjusted according to intensity because it is inversely related to intensity. The repetition and sets were increased progressively from first week to proceeding week. The duration of training was 30-45 min. for each experimental day. The duration of warm-up and warm-down were fixed at ten to fifteen minutes respectively. Control group was not allowed to take part in the specific experimental training programme expect they had daily general warming up and had their normal activities. The following drills were used for this study: Speed: Standing stationary arm swings, straight leg shuffle, weighted arm swings, “A” skips, contrast resisted arm swings, skipping for height. Agility: Forward roll, carioca, backward roll, side to side with cone reach, sprawl and stand up, side to side with volley. Quickness: Hip-twist ankle jumps, MB wall chest passes, in- place tuck jumps, tap drills, pike jumps, one- handed tap drills with partner.

### 5. RESULTS AND DISCUSSION

Table-1 Significance of mean gains /losses between pre and post test of SAQT and CG on selected physiological variables

| Variables                 | Pre-test | Post-test | Diff. | SE   | ‘t’-ratio |
|---------------------------|----------|-----------|-------|------|-----------|
| <b>SAQ Training Group</b> |          |           |       |      |           |
| Heart-rate                | 74.35    | 70.35     | 4.00  | 0.22 | 18.38*    |
| SBP                       | 122.55   | 118.10    | 4.45  | 0.45 | 9.89*     |
| DBP                       | 81.25    | 78.05     | 3.20  | 0.43 | 7.39*     |
| <b>Control Group</b>      |          |           |       |      |           |
| Heart rate                | 74.50    | 73.75     | 0.75  | 0.38 | 1.99      |
| SBP                       | 121.85   | 121.75    | 0.10  | 0.67 | 0.15      |

Level of Significance 0.05 levels: 2.09

Table-1 indicates that the obtained ‘t’ values of the control group (CG) on variables are: 18.38 (heart rate), 9.89 (systolic blood pressure) and 7.39 (diastolic blood pressure). The obtained t- values are significant at 0.05 levels for degree of freedom 1, 19 and the required critical value is 2.09. Hence the obtained t-values on the selected variables are higher than the required critical value, it is concluded that the combination of control group, has produced significant changes positively from its baseline to post treatment on physiological variables of heart rate (+4.00P<0.05), systolic blood pressure (+4.45P<0.05) and diastolic blood pressure (+3.20P<0.05) from the performance of baseline. Table indicates the obtained values of the CG-II on variables are: 1.99 (heart rate), 0.15 (systolic blood pressure) and 1.34 (diastolic blood

pressure). The obtained t- values are significant at 0.05 level for degree of freedom 1, 19 and the required critical value is 2.09. Hence the obtained t-values on the selected variables are lesser than the required critical values, it is concluded that the changes made from baseline to post treatment of traditional training only group on and physiological variables statistically not control group do not produce significant improvement in physiological variables namely heart rate (+0.75P<0.05), systolic blood pressure (+0.10P>0.05) and diastolic blood pressure (+0.60P<0.05) from the performance of baseline. The pre-test and post-test mean differences of SAQ training (SAQT) and Control Group (CG) on heart rate, systolic blood pressure and diastolic blood pressure are graphically represented in Fig 1 to Fig 3.

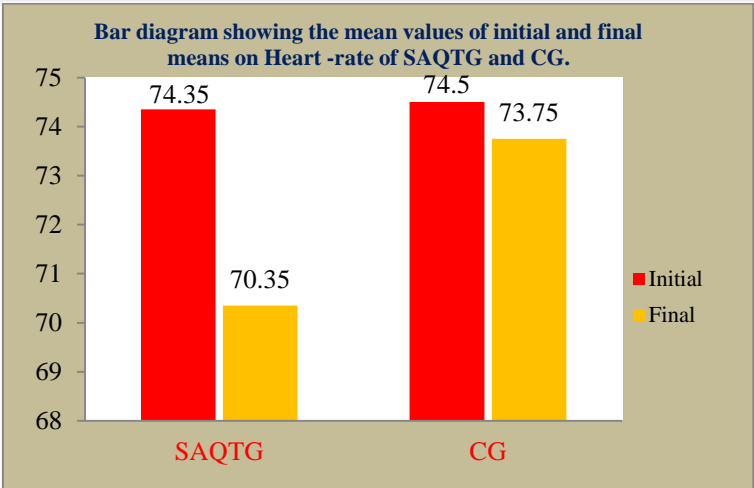


Fig-1

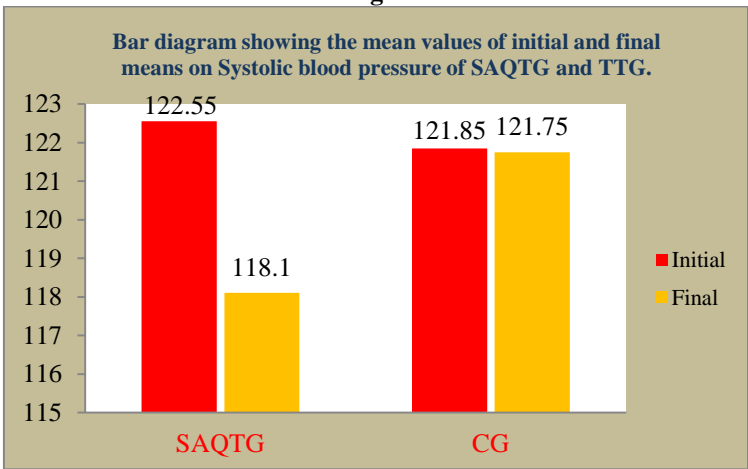


Fig-2

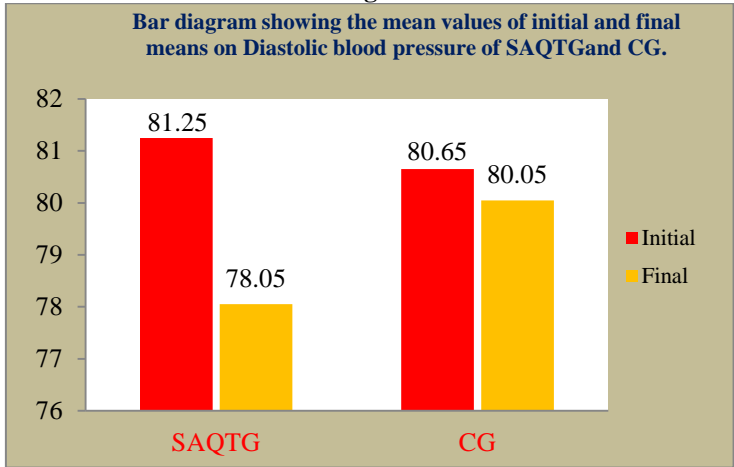


Fig-3

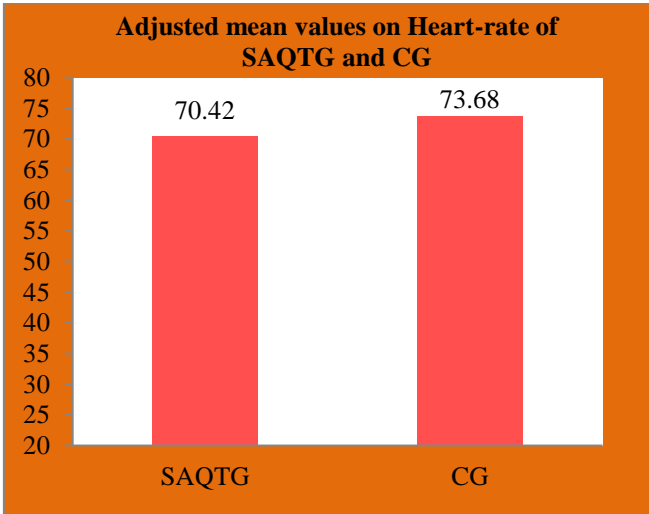


**Table -2**  
**ANCOVA on skill performance variables of SAQ training and control group**

| Variables                       | F – Value |           |                    |
|---------------------------------|-----------|-----------|--------------------|
|                                 | Pre-Test  | Post-Test | Adjusted Post Test |
| <b>Heart Rate</b>               | 0.03      | 12.12*    | 54.81*             |
| <b>Systolic Blood Pressure</b>  | 0.66      | 18.11*    | 31.04*             |
| <b>Diastolic Blood Pressure</b> | 1.51      | 16.19*    | 17.72*             |

Table-2 reveals that the obtained ‘F’ value of pre-test on heart rate is 0.03, systolic blood pressure 0.66 and diastolic blood pressure is 0.71. Since the observed F values on pre test among the groups namely SAQ training and control group were insignificant as the value was lesser than the critical value 4.20 for df (1, 28) at 0.05 levels. The obtained ‘F’ value of post-test on heart rate is 12.12, systolic blood pressure 18.11 and diastolic blood pressure is 16.19. Since the observed F values on post test among the groups namely SAQ training and control group were highly significant as the value was higher than the critical

value 4.20 for df (1, 28) at 0.05 levels. The obtained ‘F’ value of adjusted post-test on heart rate is 54.81, systolic blood pressure 31.04 and diastolic blood pressure is 17.72. Since the observed F values on adjusted post test among the groups namely SAQ training and control group were highly significant as the value was higher than the critical value 4.21 for df (1, 27) at 0.05 levels. The adjusted post-test means of SAQ training (SAQT) and Control Group (CG) on speed, agility, quickness, serving ability and passing ability are graphically represented in Fig 4 to Fig 6.



**Fig-4**

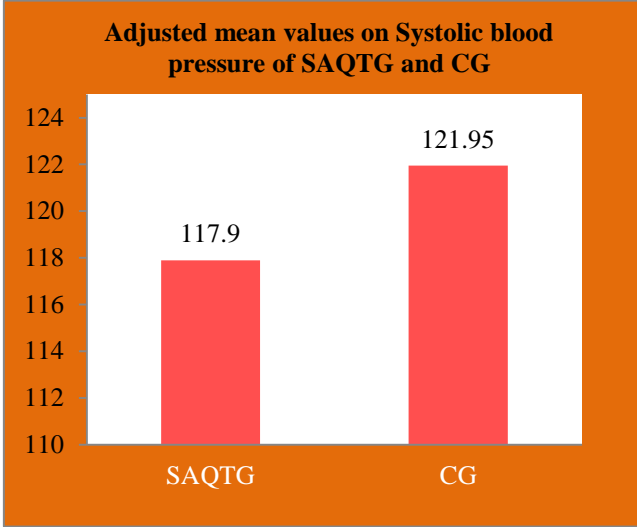


Fig-5

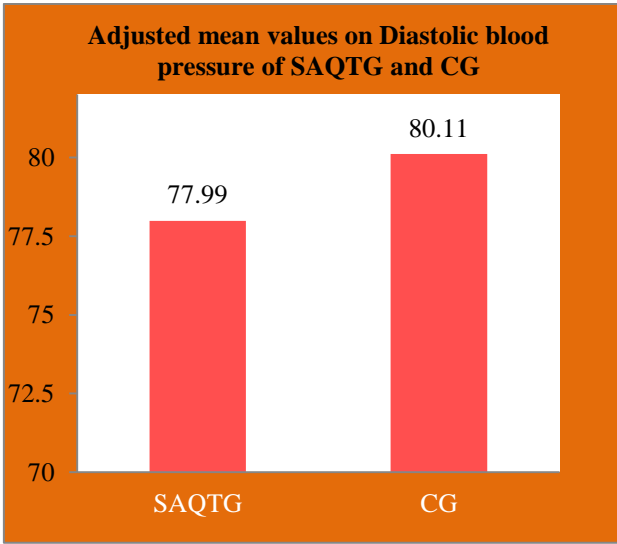


Fig-6

**6. CONCLUSIONS**

Based on the findings and within the limitation of the study it is noticed that practice of selected S.A.Q drills helped to improve physiological variables of inter-collegiate football players. It was seen that there is progressive improvement in the selected criterion variables of experimental groups of football players after twelve weeks of training programme. Further practice of drills also helps to improve other fitness factors i.e. explosive strength, speed, agility and quickness that play major role in performance. There was significant improvement found in physiological variables and other variables of control groups, while comparing pre and post test mean score following conclusion were drawn. The rate of improvement physiological performance (heart rate, systolic blood pressure and diastolic blood pressure) was higher for the experimental groups in comparison to control groups due to S.A.Q training.

**7. DISCUSSION ON FINDINGS**

After collection of data, appropriate statistical analysis has been done. The results, in general, support the theory that S.A.Q. drills improve physiological variables of inter-collegiate football players. We found that experimental group improved significantly which is finding between pre to post test. From the findings it was evident that the treatment given to experimental group found to enhance the football players physiological parameter improvement of inter-collegiate players in comparison to control group for pre to post (12weeks) test because the tabulated value was found approximately more than required value to be significant. The results of this study support the use of football players have been exposed first time to S.A.Q. training programme which is highly scientific and systematic in nature because of which optimum adaptation and enhancement in physiological variables has been seen. It is proved even by the available literature by **Senthil Kumaran, Abdul**





**Halik (2021)** Tracking Instant Physiological Changes Pre-Post Basketball Play Whilst recent studies **Hanjabam and Kailashiya (2014)** have tended to show that SAQ training methods have a positive physiological performance. It was concluded the study are also in agreement with the findings of previous studies **Singh, and Deol (2018)** investigated the effect of SAQ training program on systolic and diastolic blood pressure of female soccer players. In this study the researcher found that twelve weeks SAQ training programme shows significant effect on systolic blood pressure variable among male football players.

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# A STUDY OF EDUCATIONAL ADJUSTMENT IN RELATION TO SELF EFFICACY OF SECONDARY SCHOOL STUDENTS

Dr Rajkumari <sup>1</sup>, Ms Babita<sup>2</sup>

<sup>1</sup>Assistant Professor, BPS Institute of Teacher Training & Research, BPSMV, Khanpur Kalan, Sonapat  
<sup>2</sup>M.ED Student

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## ABSTRACT

*The present study was conducted with the purpose to see a study of Educational Adjustment in relation to Self-efficacy of secondary school students. The present study was conducted to a randomly selected sample of 100 secondary school students of 9th class studying in Government and Private schools of Sonapat deistical in Haryana. Adjustment inventory developed and standardised by Basant Bahadur Singh & Seema Rani(2006) and Self-efficacy scale developed and standardised by Dr Arun Kumar Singh & Dr Shruti Narain(2014) used to collect data. The collected was analysed with the help of inferential statistics t-test'. The results of the study showed that girl's students of secondary schools are found educationally less adjusted than male students of secondary schools. Govt. school students are found educationally less adjusted than private school students. No significant difference is found in the self-efficacy of secondary school students in relation to their gender and type of school.*

**KEYWORDS:** Educational adjustment, Self-efficacy, Gender, Type of school, Secondary school students.

## INTRODUCTION

Education is the process of acquiring knowledge, skills, values, beliefs and habits which makes a person good citizen. Educational adjustment means how an individual is imparting his duties towards his education and whether he is able to get his goal or not. If an individual is unable to get good marks in the examination, he will face the problems to adjust himself in that educational environment while those students who get good marks in the examination feel better adjusted in their educational setup. Healthy environment in the school helps the persons in making school adjustment. Satisfaction of the child with the behaviour in of his class-fellow, teachers, and head of the institution, methods of teacher, discipline, timetable, co-curricular activities influences his adjustment.

## SELF-EFFICACY

Self-efficacy is defined as people's belief about their capabilities to produce designated levels of

performance that exercise influence over events that affect their lives. It is a belief that one has the capabilities to execute the courses of actions required to manage prospective situations.

## REVIEW OF RELATED STUDIES

Pooja Bhagat (2017) Conducted a study on "Educational-Adjustment and Self-Efficacy of Secondary School Students In Relation To Their Gender and Type of School" Sample of this study was 200 students felled thought random sample method of this study was used descriptive result showed female students of S.S.C. Govt school was found less adjusted as compare to boys. Govt School Student was found less adjusted as compare to private result indicate that no difference was found of boys and girls on the bases of self efficacy.



### STATEMENT OF THE PROBLEM

“A Study of Educational Adjustment in relation to Self Efficacy of Secondary School Students,,

### OBJECTIVE OF THE STUDY

1. To study the educational adjustment of secondary school students.
2. To study the self-efficacy of secondary school students.
3. To find the relationship between educational adjustment and self-efficacy of secondary school students.

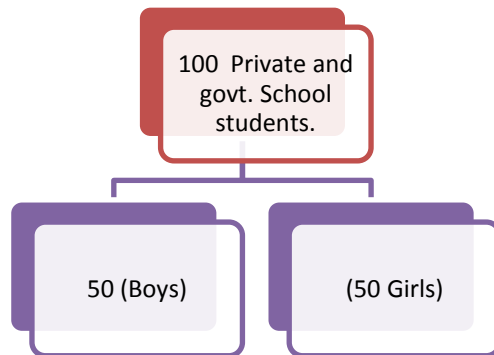
### HYPOTHESIS OF THE STUDY

1. There is no significant relationship between educational adjustment and self-efficacy of secondary school students.

### RESEARCH METHODOLOGY

In present paper descriptive survey method was used.

### SAMPLE OF THE STUDY



### VARIABLE OF THIS STUDY

Variable i.e. Educational Adjustment, Self Efficacy was taken for research work.

“Self Efficacy” was development by Dr Arun Kumar Singh & Dr Shruti Narain(2014)

### TOOL USED

“Educational Adjustment” was developed by Basant Bahadur Singh & Seema Rani(2006)

### Statistical Techniques Used

Mean, T-test and ‘r’ was used for analysis the data.

### RESULT AND DISCUSSION

**Objective-1: To compare the educational adjustment of boys and girls secondary school students.**

Table-1

| Group | N   | Mean  | SD   | ‘t’ Value | Results                   |
|-------|-----|-------|------|-----------|---------------------------|
| Boys  | 100 | 39.68 | 4.24 | 0.06108   | Significant at 0.01 level |
| Girls | 100 | 41.06 | 3.68 |           |                           |

\*Significant at 0.05 level

\*\*Significant at 0.01 level

Above table show that, the mean score of educational adjustment of girl’s secondary school students is 41.06. The mean score of boys’ secondary school students is 39.68. The t- value comes out to be 0.061 which is

significant at 0.01 levels. Thus, the null hypothesis there is no significant difference in the educational adjustment of secondary school students in relation to their gender” is rejected.



## 2 To compare the self-efficacy of boys and girls secondary school students.

**Table-2**

| Group | N   | Mean  | SD    | 't' Value | Results                   |
|-------|-----|-------|-------|-----------|---------------------------|
| Boys  | 100 | 73.66 | 9.50  | 0.486584  | Significant at 0.01 level |
| Girls | 100 | 75.1  | 10.99 |           |                           |

\*Significant at 0.05 level

\*\*Significant at 0.01 level

Above table shows that, the mean score of self-efficacy of boy secondary school students is 73.66. The mean score of self-efficacy of girl secondary school students is 75.1. The t- value comes out to be 0.4865 which is

not significant at 0.05 levels. Thus, the null hypothesis "There is no significant difference in the self-efficacy of secondary school students in relation to their gender" is accepted.

## 3. To find the relationship between educational adjustment and self-efficacy of secondary school students.

**Table -3**

| Group | N   | S.D   | 'r' Value |
|-------|-----|-------|-----------|
| Boys  | 100 | 9.50  | 0.048     |
| Girls | 100 | 11.05 |           |

The above table shows that the SD of boys and girls are 9.50 and 11.05 respectively .The calculated value of correlation between educational adjustment and self-efficacy of secondary school students. So the null hypothesis is there is no significant relationship between educational adjustment and self-efficacy of secondary school students.

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# MANAGEMENT OF INFERTILITY DUE TO PCOS THROUGH AYURVEDA – CASE SERIES

Dr Seema Yadav<sup>1</sup>, Dr Gayathri Bhat N V<sup>2</sup>

<sup>1</sup>Final Year PG scholar , Dept of Prasooti Tantra and Stree Roga ,  
Sri Dhramsthala Manjunatheshwara College of Ayurveda and Hospital , Hassan

<sup>2</sup>Professor and Head of Department , Dept of Prasooti Tantra and Stree Roga ,  
Sri Dhramsthala Manjunatheshwara College of Ayurveda and Hospital , Hassan

## ABSTRACT

**INTRODUCTION**-Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. Poly cystic ovarian syndrome is a metabolic disorder affecting the females of active reproductive age group. The syndrome has been much debated in present day due to its complicity. This condition has key features like menstrual disturbances mainly oligomenorrhea and amenorrhea, hyperandrogenism, obesity and infertility and in long term even leads to endometrial carcinoma. The well accepted ovulation induction drugs have side effects and have limited use. Metabolic disturbances and menstrual disorders specifically anovulation is the result of kapha predominant diseases condition. Vamana one among the shodhana adopted to normalise the aggravated kapha there by stimulating ovulation hence in these cases vamana and Kanchnara Guggulu as samana aushdhi considered in the management of infertility due to anovulation with PCOS.

**METHODOLOGY**-Three female who were anxious to conceive and diagnosed with PCOS were selected and all the three subjects were having menstrual irregularities and follicular study revealed anovulation. Depana pachana was given with Panchkola phanta 50ml TID before food for 3 days. From 4<sup>th</sup> day snehpana was given with Varunadi ghrutha started with 30ml (hrisva dose) in aarohana karma till samyaksnehana lakshana achieved. Vamana was done after a day of vishrama kala followed by kaphoutkleshkara aahara. All three had Pravara vega hence 5 days samshrana karma was advised and after noral diet was started kanchnara guggulu 250mg in BD dose for consecutive 2 cycles.

**RESULT**- The size of the cysts decreased remarkably in all cases and they conceived after 1-2 months of completion of the treatment

**DISCUSSION** -Anovulation is considered as Nastartva which is the main feature of PCOS. Kaphavruta Apanavata is the main pathology in Nastartva. Kapha aavarana was relieved by vamana so that function of Vata and Pitta was regularised. Kanchnara guggulu helps in granthi vilyana and help in regularise the menstruation.

**KEY WORDS** – PCOS, Infertility, Avarana, Granthi vilyana , Artavkshaya, Nasthartava .

## INTRODUCTION

People of present era are habituated to sedentary way of life due to which they are prone to get different types of metabolic ailments. Poly cystic ovarian syndrome is one among them affecting the females of active reproductive age group. The syndrome has been much debated in present day due to its complicity. Poly cystic ovarian syndrome is a common endocrine disorder of hypothalamic pituitary ovarian (HPO) axis causing oligovulation or anovulation leading to androgen excess in the cortex of ovaries<sup>1</sup> microscopically small multiple ovarian cysts or visible cysts which looks like string of pearl<sup>2</sup>. This PCOS has

become challenge for the management due to its complicity. The long term consequences of PCOS include obesity, infertility as well as endometrial carcinoma and insulin resistance.

Infertility is one of complication of PCOS. PCOS patients having complains of increased obesity (50%) , menstrual abnormalities(70%) in the form of oligomenorrhoea ,amenorrhoea, DUB, andinfertility.<sup>3</sup> Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. Infertility is of two types primary infertility and secondary infertility. Primary infertility denotes those patients who have never conceived.



Second infertility indicates previous pregnancy but failure to conceive subsequently.<sup>4</sup>

Both male and female factors are responsible for conception. The cause for female infertility are Ovulatory factor (30-40%) , Tubal and peritoneal factor(25-35%) and Endometriosis (1-10%). The ovarian factors are because of anovulation or oligo ovulation , decreased ovarian reserve , luteal phase defect and luteinised unruptured follicle.<sup>5</sup>

According to Rotterdam, the Netherlands a consensus meeting between the European Society of Human Reproduction and Embryology and the American Society for Reproductive medicine ( ESHRE/ASRM)- The Rotterdam ESHRE/ASRM sponsored PCOS consensus workshop group, 2004 redefined PCOS that women should have two of the following three criteria<sup>6</sup>.

- 1) Oligo and/or anovulation
- 2) Hyperandrogenism( clinical and/or biochemical)

3) Polycystic ovaries identified sonographically.

All the symptoms of PCOS may not be seen in one woman. Different symptom can be seen in different women. The increased prevalence of PCOS is day by day due to faulty diet habits and sedentary life style in reproductive age group of women. The incidence of poly cystic ovarian syndrome is increasing day by day with prevalence ranging from 2.2 % to 26% in the age of between 18 yrs to 45 yrs. In India its prevalence has been estimated as 4- 25% and in Indian adolescent is 9.13%<sup>6</sup>.

## MATERIAL AND METHODS

Here is a case series of 3 patients presented in the in patient department of Prasooti Tantra and Stree Roga of Sri Dharamsthala Manjunatheswara hospital , Hassan.

| Case 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Case 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Case 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Age-</b> 28yrs<br/> <b>C/O-</b> anxious to conceive since 3yrs<br/>           Irregular menstruation since 4yrs<br/>           K/C PCOS since 3and half year.<br/> <b>MH-</b> irregular<br/>           2-3days/45-60days<br/>           1 pad/day (not fully soaked)<br/>           Pain+<br/>           Clots+<br/> <b>Systemic examination-</b><br/>           P/A- soft, non tender<br/>           P/S- Cervix healthy ,<br/>                   No white discharge<br/>           P/V- AV/NS/FF</p> <p><b>Investigation –</b><br/> <b>Blood Routine-</b> within normal limit</p> <p><b>USG(14/12/2020)</b></p> <p><b>Imp-</b> polycystic ovarian syndrome(more than 20 atretic follicles of less than 10mm size are seen in both the ovaries . No dominant follicles seen in B/L ovaries.</p> | <p><b>Age-</b> 25yrs<br/> <b>C/O-</b> anxious to conceive since 2yrs<br/>           Irregular menstruation since 2 and half years<br/>           K/C PCOS since 1yr<br/> <b>MH-</b> irregular<br/>           1-2days/40-50days<br/>           1pad/day<br/>           Pain +<br/>           Clots+<br/> <b>Systemic examination-</b><br/>           P/A- soft, non tender<br/>           P/S- Cervix healthy ,<br/>                   No white discharge<br/>           P/V- AV/NS/FF</p> <p><b>Investigation –</b><br/> <b>Blood Routine-</b> within normal limit</p> <p><b>USG(2/1/21)</b></p> <p><b>Imp-</b> B/L polycystic ovaries<br/>           No free fluid in pouch of douglas.<br/>           Multiple small peripheral follicles seen in both ovaries.</p> | <p><b>Age-</b>26yrs<br/> <b>C/O-</b> anxious to conceive since 2 and half years<br/>           Irregular menstruation since 3years<br/>           K/C PCOS since 1year<br/> <b>MH-</b> irregular<br/>           2-3days/40-60days<br/>           1pad/day<br/>           Pain ++<br/>           Clots+<br/> <b>Systemic examination-</b><br/>           P/A- soft, non tender<br/>           P/S- Cervix healthy ,<br/>                   No white discharge<br/>           P/V- AV/NS/FF</p> <p><b>Investigation –</b><br/> <b>Blood Routine-</b> within normal limit</p> <p><b>USG (23/11/20)</b></p> <p><b>Imp-</b> B/L polycystic ovaries<br/>           Multiple small peripheral follicles with thick ovaries stroma.</p> |



## TREATMENT PROTOCOL

Shodhana chikitsa

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Deepana pachana with | Panchkola phnata 50ml TID (A/F)                                               |
| Snehpana with        | Varunadi ghrutha ( in aarohana karma till samyaka snighdha lakshans appeared) |
| Kaphoutklesha aahara | For one day                                                                   |
| Vamana               |                                                                               |
| Samsrajana karma     | According to no of vega                                                       |

Samsana chikitsa

Kanchnara Guggulu 2 tb(250gm) BD (B/F) for consecutive 2 cycle

Follow up every month

Assessment by USG after 3 months.

## TREATMENT DETAILS

|                                          | Case 1                                     | Case 2                                     | Case 3                                     |
|------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|
| Date of admission (treatment started on) | 02/01/2021<br>3 <sup>rd</sup> day of cycle | 01/01/2021<br>4 <sup>th</sup> day of cycle | 01/01/2021<br>3 <sup>rd</sup> day of cycle |
| Deepana pachana                          | For 3 days                                 | For 3 days                                 | For 3 days                                 |
| Snehpana                                 | For 4 days                                 | For 4days                                  | For 5 days                                 |
| Vishrama kala                            | For one day                                | For one day                                | For one day                                |
| Vamana done on and no of vegas           | 10/01/2021<br>No of vega-08                | 09/01/2021<br>No of vega -09               | 10/01/2021<br>No of vega-06                |
| Samrajana karma                          | For 5 days                                 | For 5 days                                 | For 3 days                                 |
| Samsana chikitsa started on              | 15/01/2021                                 | 14/01/2021                                 | 13/01/2021)                                |
| Duration of complete study               | 3 months<br>(jan-april)                    | 3 months<br>(jan-april)                    | 3 months<br>(jan-april)                    |

## RESULT

|               | Before treatment                                                                                                                                                                    | After treatment                                                                                                                                     | Conceived after                                                                      |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Case 1</b> | <b>USG(14/12/2020)</b><br>B/L poly cystic ovarian syndrome.<br>Thick hyperechoic stroma is seen.more than 20 atretic follicles of less than 10mm size are seen in both the ovaries. | <b>USG(29/6/2021)</b><br>Imp- SLIU gestational sac seen with single viable fetal pole of about 8wks 3days .<br>Cardiac activity seen<br>CRL-19.35mm | within one month after treatment<br>treatment finished on 2/4/21<br>LMP- not known   |
| <b>Case 2</b> | <b>USG(2/1/21)</b><br><b>Imp-</b> B/L polycystic ovaries<br>No free fluid in pouch of douglas.<br>Multiple small peripheral follicles seen in both ovaries.                         | <b>USG(14/4/2021)</b><br><b>Imp-</b> single live intrauterine gestation of 6wks 1 day +/-1wk<br>Good cardiac activity seen<br>CRL-3.9mm             | Within one month after treatment<br>Treatment finished on 1/4/2021<br>LMP- not known |
| <b>Case 3</b> | <b>USG (23/11/20)</b><br>Imp- B/L polycystic ovaries<br>Multiple small peripheral follicles with thick ovaries stroma.                                                              | <b>USG(9/7/21)</b><br><b>Imp-</b> single live intrauterine gestation of 6wks 1 day +/-1wk<br>Good cardiac activity seen<br>CRL-3.6mm                | Within 2 months after treatment<br>Treatment finished on 1/4/2021<br>LMP- 21/5/2021  |



## DISCUSSION

By analyzing the causes of PCOS, it can be stated that obesity is one of the main cause for the disease. And for the causes for Sthoulya, by intake of madhura, guru a, abhishyandi aahara kapha dosha will be vitiated which create snigdhta and cause srotorodhaka which obstructs the normal function of vata dosha and this kapha leads to agnimandya by which proper rasa dhatu formation will be not there and manifests staulayta .Animandyata leads to formation of aama dhatu which results into uttrotaraama dhatu formation. Kapha as mala of medo dhatu and snigdhta increased which result into medovruddhi. This Medovruddhi adds to the pathogenesis of the disease by vitiating all Srotasas except that of Meda and result into Vatavaigunya<sup>8</sup>. So here we can conclude that formation of Rasa Dhatu and its Upadhatu Artava is affected in women who is having obesity which results into irregular menstruation and which leads to vandhyatwa (infertility).

Treatment in PCOS should mainly aim at

1. Agnideepana
2. Artavajanana
3. Granthivilyana

The drugs and procedure proposed for the treatment of PCOS should possess properties like deepana, pachana, shothahara, artavajanana, medohara and lekhanitya properties.

Discussion on drug panchkola phanta<sup>9</sup>-

Almost all the drug possesses hypoglycaemic and hypocholesterolaemia activity which brings down the hyperinsulinemia state found in PCOS, which is the root cause for the disease and prevents from complications.

Discussion on Varunadi ghrutha<sup>10</sup>-

Most of the drugs in Varunadi ghrutha has ushna veerya and katu vipaka which acts as Kaphamedo hara and are having the gunas such as Laghu, Tikshna, ushna guna which helps Aartava vardhaka.

The main ingredients is Varuna (Crataivanorvela) has ushna veerya and laghu ruksha guna which mainly helps in removing of kapha dosha

### Discussion of vamana procedure<sup>11</sup>

Due to vamana urdhwabhagahara Prabhava, Vamakadravya produces vamana. The site of action of vamakadravya is in koshta and in amashaya, where the udbhava sthana of kapha is present. The vitiated kapha is expelled out through the mechanism of vamana and severity of disease can be controlled up to maximum level.

In the disease manifestation of PCOS, there is Kapha avarana which obstructs the normal function of apanavata. By the procedure of Vamana, the Kapha

avarana will be removed so that vata can revert back to its normal function.

Vamana karma increases the blood supply in brain and tonic release of gonadotrophins which promotes follicles growth (Proper enzymatic activity and conversion) and decreases fat cell peripheral aromatization and counter the androgen level in body.

Discussion on kanchara Guggulu<sup>12</sup>-

The majority ingredients of kanchnara guggulu are having laghu and ruksha guna and ushna veerya which helps in stimulate the Agni and clear the sama guna and initiating proper function of aahara rasa and its upadhatu aartava.

The formulation is designed with a comprehensive approach to address the multiple factors of PCOS. Granthihara, vata kaphashamak and aartavajanka properties of kanchnaraguggulu and breakdown the pathogenesis of kaphaja granthi.<sup>13</sup>

In these cases infertility were because of PCOS. So here PCOS gets corrected and menstrual irregularities comes normal

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# THE STATE SYSTEM OF STANDARDIZATION OF THE REPUBLIC OF UZBEKISTAN WITH THE EXAMPLE OF THE FERGANA REGION

**Xamidov Doniyor Baxodirovich**

*Master degree of "Engineering and technology institute of Namangan"*

*Department of "Metrology, standardization and quality management"*

## ANNOTATION

*According to this article, the law "Uzbek Agency of Technical Regulation" in the Republic of Uzbekistan there is a standardization system regulating the general organizational and technical rules for carrying out standardization work with the example of the Fergana region.*

**KEYWORDS:** *rules, standardization, functioning, economy, health care, authorities.*

## INTRODUCTION

First of all, we get acquainted with the "Organization, coordination and provision of standardization work" carried out by:

- In the sectors of the national economy - Uzbek Agency for Standardization, Metrology and Certification (Agency "Uzbek Agency for Technical Regulation");
- In the field of construction, construction industry, including design and construction, - Ministry of Construction of the Republic of Uzbekistan;
- In the field of regulation of the use of natural resources and environmental protection from pollution and other harmful effects — The State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection;
- In the field of medical products, including medicines, medical devices, medical equipment, as well as in matters of determining the content of substances harmful to humans in products manufactured in the Republic of Uzbekistan, including imported ones — the Ministry of Health of the Republic of Uzbekistan;
- In the field of defense capability and mobilization readiness, defense products - the Ministry of Defense of the Republic of Uzbekistan.

In accordance with this Law, the bodies of the Fergana Region jointly develop, approve and publish standards on the basis of public administration within their competence.

## METHODOLOGY

According to the article of this Law, the Agency "Uzbek Agency for Technical Regulation"

establishes general rules for standardization work, forms and methods of interaction of interested parties with public administration bodies, public associations.

The regional authorities that have approved standards on the basis of the law of the Republic create and maintain industry information funds of standards and provide interested consumers with information about international (interstate, regional) standards, standards of the Republic of Uzbekistan, national standards of foreign countries, as well as information about international agreements in the field of standardization, state classifiers of technical, economic and social information, rules, norms and recommendations for standardization.

The publication and reissue of the standards of the region is carried out by the bodies that approved them.

Regulatory documents on standardization of the following categories are applied in the Republic of Uzbekistan:

- International (interstate, regional) standards;
- State standards of the Republic of Uzbekistan;
- Organization standards;
- National standards of foreign countries.

The State system of unified and continuing education develops state educational standards approved by the Cabinet of Ministers of the Republic of Uzbekistan.

The normative documents on standardization also include rules, standards on standardization, classifiers of technical and economic information. The procedure for the development and



application of these documents is established by the agency "Uzbek Agency for Technical Regulation".

International (interstate, regional) standards and national standards of foreign countries, as well as international rules and regulations are applied in accordance with treaties or agreements with the participation of the Republic of Uzbekistan. The procedure for the application of these standards, rules and regulations on the territory of the republic is established by the agency "Uzbek Agency for Technical Regulation" and other state governing bodies within their competence.

Standards and amendments to them for products sold to consumers are subject to state registration with the bodies of the Agency "Uzbek Agency for Technical Regulation". Normative documents on standardization registered with the bodies of the Agency "Uzbek Agency for Technical Regulation" constitute the state information fund.

By how much, the production and sale of products without regulatory documentation is not allowed. The requirements established by regulatory documents to ensure the safety of products, works and services, for the environment, life, health and property, to ensure technical and information compatibility, interchangeability of products, unity of control methods and unity of labeling, as well as other requirements established by the legislation of the Republic of Uzbekistan, are mandatory for compliance by state management bodies, economic entities of regional figures.

Imported products cannot be delivered and used for their intended purpose unless their compliance with technical regulations or standards in force in the Republic of Uzbekistan regarding mandatory requirements is confirmed.

The Uzbek Agency for Technical Regulation, the Ministry of Construction of the Republic of Uzbekistan, the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, the Ministry of Health of the Republic of Uzbekistan and their territorial bodies, as well as other specially authorized state management bodies within their competence, carry out State supervision of compliance by economic entities with mandatory requirements of standards and other legislative acts on standardization. Coordination of work in the field of standardization is carried out by the Department of Standardization, Coordination and State Supervision of the Central Office of the Agency "Uzbek Agency for Technical Regulation".

## RESULTS

A Technical Committee (TC) has been established in the Republic of Uzbekistan to organize and carry out work on standardization of certain types of products and technologies or activities of

regional entrepreneurs, as well as to carry out work on international standardization (regional) standardization on these objects. The development of new and revision of existing state standards and technical specifications is carried out according to the annually formed "Republican Standardization Plan for the development of new and revision of existing state standards".

During the study of regional entrepreneurs according to this article, they were familiarized with the new and current laws of the republic and identified a lot of illegal use of technical standards. And also, during the study and monitoring of regional entrepreneurs under the current laws of the republic, several cases of violations of several points of the standardization laws were identified and several types of violations of the legislation of the republic under the Ferghana region were prevented.

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## USE OF ICTs FOR INCLUSIVE EDUCATION: POSSIBILITIES AND CHALLENGES

**Dr. Brahmananda Nayak<sup>1</sup>, Pawan Kumar Modi<sup>2</sup>, Ramakant Tripathi<sup>3</sup>**

<sup>1</sup>Assistant Professor, Department of Education, Eklavya University, Damoh (M.P)

<sup>2</sup>Assistant Professor, Department of Botany, Eklavya University, Damoh (M.P)

<sup>3</sup>Assistant Professor, Department of Physical Education, Eklavya University, Damoh (M.P)

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### ABSTRACT

*Right to Education is the primary right of every citizen of India, whether a child resides in a high profile society or in a far away not so developed secluded village, according to the Article 45 of Indian Constitution the basic elementary education must be provided to all the children up to the age of fourteen years. Information and Communication Technology (ICT) can be utilized for the education sector. Education includes online, distance and part time education. There are unlimited applications of ICT in the real world. In his paper emphasis is on the education field. ICT can be used for providing education to the people who are not able to come to school due to various constraints. ICT can play great role in formal and non formal forms of education. Inclusive Education proposes all students are provided with equitable access to education within the context of a mainstream educational system and not in a segregated setting. There is now significant international and national legislation and policy in support of this model but for many countries achieving this ideal is proving to be a difficult reality. Accessible ICTs have a major role to play in enabling educational authorities, educators, students and parents to move towards a more inclusive educational system. However its role as a communication aid, pedagogical tool and means of access to previously inaccessible learning materials is still, in many countries, only just beginning to be explored.*

**KEY WORDS:** ICT, Inclusive Education, Benefits, Challenges, Policy Development

### INCLUSIVE EDUCATION - FROM CONCEPT TO IMPLEMENTATION

*“If anybody asks me what the Internet means to me, I will tell him without hesitation: To me (a quadriplegic) the Internet occupies the most important part in my life. It is my feet that can take me to any part of the world; it is my hands which help me to accomplish my work; it is my best friend – it gives my life meaning.”- Dr Zhang Xu*

UNESCO advocates that where possible, children with disabilities are accommodated in inclusive schools, which it promotes as being more cost-effective and which lead to a more inclusive society. Accessible ICTs are one of many supports that can enable the realization and implementation of

inclusive education. The Convention recognizes that access to education is a fundamental right of persons with disabilities. Education is to be provided, wherever possible, in an “inclusive” manner; that is, within the context of the mainstream educational system and not in a segregated setting. These may include, as appropriate, access to (along with training in, and use of) accessible ICTs, including assistive technology and educational materials in an accessible format. The global Education for All movement, led by UNESCO, aims to meet the learning needs of all children, youth and adults by 2015. UNESCO promotes the ultimate goal of inclusive education which it views as a means to ensuring a quality education for all and to achieving wider social inclusion goals. Many national educational



systems struggle to provide a quality education in mainstream schools and favour the development of special needs schools. Inherent in inclusive education is the notion that reform and improvements should not only focus on children with disabilities but on “whole school improvement in order to remove barriers that prevent learning for all students” (GeSCI, 2007). Inclusive schools can “accommodate all children regardless of their physical, intellectual, emotional, social, linguistic or other conditions” (Salamanca framework, 1994). However inclusive education is not a synonym for special needs education or integration techniques but an “an on-going process in an ever-evolving education system, focusing on those currently excluded from accessing education, as well as those who are in school but not learning” (UNESCO, 2008).

While there has been a lot of contemplation upon education and its recent right based approach, inclusive education is yet to be mainstreamed and made a reality in India. When we talk of education, its parameters must automatically include those from the neglected sections of society. There are ample evidences in reports published by various governmental and nongovernmental agencies on discriminatory treatment given to children on the basis of caste, class and gender identities. The NCPDR organized a Public Hearing in April 2011 to discuss issues of dalit children being asked to mop the floor in many of the government schools in the central and northern part of the country. How much ever infrastructure government may provide, nothing is going to change in schools in particular and society in general till the educational institutes and those in the profession of teaching change their mind sets for attainment of fair, equal and value education and an egalitarian nation. Apart from the India's never ending quest from abolition of caste equations in education sector, there are two other sections of the population whose meaningful integration will certainly help in achieving the ideal of universalisation of education in the country. The first one in this section is the girl child and the second is the differently-abled. Merging the different world of the differently-abled into one inclusive platform National Policy on Education (NPE), 1986 initiates the process of such inclusion with integration of the differently-abled with the general community as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence. Plan of Action (POA), 1992 states that a child with disability, who can be educated in a general school, should be educated in a general school only and not in a special school. The Rehabilitation Council of India Act (RCI), 1992 provides for training of special educators and resource teachers for children with special needs. The Persons

with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1995 declares that every child with a disability should have access to free education in an appropriate environment till he attains the age of eighteen years. In spite of these legislations of the GOI (1991), NSSO (2002) records states that 59 percent of the disabled in rural areas and 40 percent of the disabled in urban areas were illiterate. This indicates to the massive gap in the existing education system in encompassing those with different-abilities under one inclusive education system. The zero-rejection policy of SSA enforces enrollment of differently-abled children in regular schools, however this clause can't ensure retainment of these children without creating a pool of trained teachers and empowering infrastructure to cater to the needs of such children. In 2005, The First Joint Review Mission of SSA and, Department of School Education and Literacy in the year 2005 admitted that the required focus has not been given towards education of differently abled children, which mostly remain due to lack of trained professional, mainly in rural areas. The RTE act also confers every differently-abled child with the right of receiving free and compulsory education.

### THE BENEFITS OF ICT IN INCLUSIVE EDUCATION

The uses of ICT is making major differences in the learning of students and teaching approaches. Schools in the Western World invested a lot for ICT infrastructures over the last 20 years, and students use computers more often and for a much larger range of applications (Volman, 2005). Kulik's (1994) finding across 75 studies in the United States showed the following. Students who used computer tutorials in mathematics, natural science, and social science score significantly higher on tests in these subjects. Students who used simulation software in science also scored higher. The findings also indicated that primary school students who used tutorial software in reading scored significantly higher on reading scores. Furthermore, the use of ICTs in education also shifts the learning approaches. As put by (Bransford, Brown, and Cocking, 2000) cited in Volman (2005), there is a common belief that the use of ICTs in education contributes to a more constructivist learning and an increase in activity and greater responsibility of students. Emerging pedagogy is the name given to the new view of constructivist learning when compared to the relatively long existing behaviourist view of learning. Tinio (2002) describes each of the pedagogic aspects in terms of implication for ICT use as follows.



**Active learning:** - ICT-enhanced learning mobilizes tools for examination, calculation and analysis of information in order to provide a platform for student inquiry, analysis and construction of new information. ICT-enhanced learning promotes increased learner engagement. ICT-enhanced learning can also be 'just-intime' learning that the learners choose what to learn when they need.

**Collaborative learning:** - ICT-supported learning encourages interaction and cooperation among students, teachers, and experts regardless of where they are. Apart from modeling real world interactions, ICT-supported learning provides opportunity to work with students from different cultures, thereby helping to enhance learners teaming and communication skills as well as their global awareness.

**Creative learning:** - ICT-supported learning promotes the manipulation of existing information and the creation of real-world products rather than the duplication of received information.

**Integrative learning:** - ICT-enhanced learning promotes a thematic integrative approach to teaching and learning.

**Evaluative learning:** - ICT-enhanced learning is student-directed and diagnostic. ICT-enhanced learning recognizes the presence of different learning pathways to explore and discover rather than merely listen and remember.

Education prepares students for the use of ICT in education, future occupation, and social life.

- ICT as an 'assisting tool'. ICT is used as a tool. Typically, ICT is used independently from the subject matter.
- ICT as a medium for teaching and learning. This refers to ICT as a tool for teaching and learning itself, the medium through which teachers can teach and learners can learn. It appears in many different forms, such as drill and practice exercises, in simulations and educational networks.
- ICT as a tool for organization and management in schools.

## ROLES OF ICT IN INCLUSIVE EDUCATION

In its training guide "*ICTs in Education for People with Special Needs*", UNESCO's Institute for IT in Education outlines 3 main roles for the use of accessible ICTs in education:

- Compensation uses – technical assistance that enables the active participation in traditional educational activities such as reading or writing.
- Didactic uses – the general process of using ICTs to transform approaches to education. Many ICTs can be used as a didactical tool to enable a more inclusive learning environment.
- Communication uses – technologies that can enable communication – often referred to as alternative and augmentative communication devices and strategies. (ISO, 2000)

## ACCESSIBLE ICTS IN SUPPORT OF INCLUSIVE EDUCATION

Accessible ICTs hold the potential to enable persons with disabilities to receive an education and become productive members of the social and economic life of their communities. Applied to education systems, the effective and well planned use of ICTs by students with disabilities can provide equitable learning opportunities through enabling communication with teachers and fellow students, providing access to learning materials and by enabling course work, assignments and examinations to be completed. The wide variety of accessible ICTs currently available that can help overcome reduced functional capacity and enable communication, cognition and access to computers.

A meta-study on research carried out by the (former) British Educational Communications and Technology Agency (BECTA) in 2003 into the use of accessible ICTs showed the following benefits to all stakeholders involved in education, including students, teachers, parents and careers (BECTA, 2003):

*In general accessible ICTs:*

- Enables greater learner autonomy
- Unlocks hidden potential for those with communication difficulties
- Enables students to demonstrate achievement in ways which might not be possible with traditional methods
- Enables tasks to be tailored to suit individual skills and abilities

*Specific benefits for students:*

- Computers can improve independent access for students to education
- Students with special educational needs are able to accomplish tasks working at their own pace



- Visually impaired students using the internet can access information alongside their sighted peers
- Students with profound and multiple learning difficulties can communicate more easily
- Students using voice communication aids gain confidence and social credibility at school and in their communities
- Increased ICT confidence amongst students motivates them to use the internet at home for schoolwork and leisure interests.

Benefits for teachers and non-teaching staff:

- Reduces isolation for teachers working in special educational needs by enabling them to communicate electronically with colleagues
- Supports reflection on professional practice via online communication
- Improved skills for staff and a greater understanding of access technology used by students
- Enhances professional development and the effectiveness of the use of ICT with students through collaboration with peers
- Materials already in electronic form (for example, from the internet) are more easily adapted into accessible resources such as large print or Braille.

Benefits for parents and carers:

- Use of voice communication aids encourages parents and carers to have higher expectations of children's sociability and potential level of participation.

### **POLICY DEVELOPMENT IN SUPPORT OF ACCESSIBLE ICTS IN INCLUSIVE EDUCATION.**

In general policy development for the use of ICTs in schools is recognized as a "complex proposition based on the principle that technology is not only a tool [but requires] a shift the focus from technology provision to the design of learning environments" (UNESCO, IITE, 2010). The UNESCO Policy Brief "ICT for Inclusion: Reaching More Students More Effectively" proposes a number of main areas for policy interventions as summarized below.

- Infrastructure,
- Support for practice,
- Needs assessment for persons with disabilities,
- Training for students and teachers,
- Co-operation and research on best practices and
- Evaluation on the benefits and uses of ATs.

Finally, in support of this evidence-based policy, a small number of research studies are likely to significantly impact on the efficacy of any policy interventions. In particular the research should establish:

- National demographics on persons with disabilities and number of students likely to benefit from provision of accessible ICTs;
- Current ICT infrastructure within the school including number of computers and school connectivity to the internet;
- Types and numbers of accessible ICTs required;
- Affordability and availability in country of required accessible ICTs;
- Efficacy and sustainability of current funding strategies for provision and support of ICTs;
- Attitudes, knowledge of students, parents teachers towards accessible ICTs;
- Preparedness of teachers to incorporate accessible ICTs into their pedagogical practices;
- Availability of support dedicated networks for teachers and students; availability of services such as community based rehabilitation services that could potentially support students and teachers in the use of high and low tech ATs for use in learning environment.

### **CHALLENGES OF ICT FOR INCLUSIVE EDUCATION**

Certain challenges also exist for the ICT based teaching learning. One of the great challenges for quality control in education is lack of standards for parameters to measure the quality of education. For the solution of this all the accreditation bodies like NAAC, NBA, AICTE, CBSE and other authorities must sit together and circulate a standard list of parameters to decide the quality of education. Development of ICT has changed the epic centre of knowledge and hence in many of the cases student is more informed than the teacher. Teachers lack adequate qualification and training and their lesson plans are most often outdated or irrelevant. Setting up the ICT devices can be very troublesome. It is expensive to afford it is hard for teachers to use with a lack of experience using ICT tools. These reasons destroy the available quality of education. ICT enabled distance education, to a great extent, can combat this problem. One of the important barriers is lack of trained teachers to exploit ICT proficiently. Most of the teachers are not willing to introduce new technologies to themselves first and subsequently to their students. There is resistant from



teachers, basically from older teachers as compared to younger ones, to apply ICT in their subject. Hence teachers need to update their knowledge and skills as per change in the curriculum and technologies. At present, ICT in school education is strictly limited to a handful of elite schools. Beyond that, it's just a computer lab that's held apart from the conventional educational process. Though computers came to Indian classrooms in the year 1984-85, the level of adoption of modern technology in the teaching and learning process has been limited and uneven (Bharadwaj, 2007). Various ICT tools must be available and it must be accessible at demand. Many schools have limited resources for buying books, stationery, furniture and other classroom materials. Role of private sector providing services in such sectors may be taken into account. Rural population may not be able to pay hefty amount to utilize such ICT resources for education. One of the major challenges in the implementation of ICT in education is the initial thinking that is based on the technology. ICT hardware and software are not designed as per educational purposes rather they are designed for general purpose. One first thinks about the available technology and then a try is being made to apply it into education field, but if we look at in reverse way then possible outcomes may be more useful and may give good results. As per latest tradition only special subject like IT or ICT is available and that is also optional one there is need for to have basic knowledge of computers and IT to utilize various ICT tools to be used for teaching learning. Only computer teachers would not be able to carry this important mission of being agents of change. To sort out infrastructure problems for providing ICT education in schools one can split the screen in half vertically and at two sets of an application can be displayed and used by two users (students) simultaneously. Because one student may use the keyboard and another may use mouse, each student can work independently of the other (Linden, 2008). The survey (Bharadwaj, 2007) done in 2007 in two highly ICT enabled states Gujrat and Karnatka says that Access to government school students to ICT tools outside schools is in general low. The access of private school students to such devices is comparably better. It also shows that one of the challenges to be met is also of digital divide in private and Government schools and moreover in rural and urban schools also. Major challenge for educators and trainers is how to develop learning materials for delivery on available ICT tools including mobile devices. The learning materials should be in manageable learning chunks and should make use of multimedia. There are many advantages of using learning objects in mobile delivery including: they can

be re-used and changed without affecting other learning objects, and they can be stored in an electronic repository for remote access at any time (Mohamed, 2009). Barriers include costly supportive infrastructure, developing online material can be expensive and time consuming, quality, validity of online material, lack of flexibility in already prepared study material. A lot of information available online may dissuade student learning. Students can feel isolated in absence of classroom like environment. Computer Programmes at various levels of quality parameters can be used to control, manage and put strict discipline in the campuses through use of computer application for Curriculum development, Teaching and learning, Research and extension, Governance and leadership, infrastructural facilities and use of expert system in suggesting intelligent decisions to top management in policy making and other important areas in higher education (Chavan et. Al, 2012).

Key challenges of ICTs are to prepare student teachers for:

- Autonomous planning and incorporation of ICT in lesson planning and performance;
- Inquiry and research approach when identifying ICT tools and systems and their application in teaching and learning;
- Creativity and innovation for teaching with ICT, designing learning material and learning environment, which foster creativity of all students assisting variety of individual approaches in creative communication and participation

## CONCLUSION

Quality in education through ICT and its awareness among stakeholders will have positive impact on the society. ICT can be helpful in quality and standards of education by implementing it in various phases of education. ICT can be employed in formal and Non-formal types of education and would eventually make the learners employable and socially useful part of the society. By employing ICT in teacher training can save a lot of money of the Government. Moreover a lot of qualitative improvement can be seen as resource persons for the training can be best of the world. By employing ICT in administration can help in solving the problem of Absenteeism of students and teachers. Good quality content is one of the major issues and directly affects the standards of education and quality. By overcoming the certain challenges involved in the process of education can help a lot in this side. Conclusively a lot of quality improvement is





possible after careful and planned implementation of ICT in education by various stakeholders.

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# ON SOME SPECIAL FEATURES OF THE HENON MAPPING

**Dr. Kulkarni Pramod Ramakant**

*P. G. Department of Mathematics, N.E.S. Science College, Nanded.431602 (M.S.), India.*

## ABSTRACT

*In this paper we have studied Henon map as a two dimensional discrete non-linear dynamical system. We have studied some special features of the Henon mapping. We have obtained the fixed points as well as the periodic orbits of the Henon map and obtained some results regarding their stability. Also, we have obtained the graphs of the iterates for different initial conditions and shown the presence of the chaotic attractor for different parameter values.*

**KEYWORDS:** *Dynamical system, Henon map, fixed points, periodic orbits, strange attractor, chaos*

## 1. INTRODUCTION

An unpredictable and very strange dynamics is observed in very complex dynamical systems [3, 4, 6] appearing in nature can also be observed in very simple nonlinear dynamical systems. The simplest of such dynamical systems is the tent function [2, 5]  $T_\mu(x)$  defined on the unit interval  $[0, 1]$  by

$$T_\mu(x) = \begin{cases} \mu x & 0 \leq x \leq \frac{1}{2} \\ \mu(1-x) & \frac{1}{2} \leq x \leq 1 \end{cases},$$

where  $\mu$  is a parameter with  $0 \leq \mu \leq 2$ . Many authors have proved that the tent mapping has a period three cycle [7, 9] given by  $\{\frac{1}{7}, \frac{2}{7}, \frac{4}{7}\}$  for  $\mu = 2$ . The existence of period 3-cycle is one of the indications of the chaotic phenomenon [10, 12]

In this paper we will point out some of the important features of the Henon map. The Henon map was discovered by the French astronomer Michel Henon in 1975 who showed that a strange attractor can also be found in a two dimensional quadratic mapping. The Henon map  $f: R^2 \rightarrow R^2$  is defined by  $f(x, y) = (1 - \alpha x^2 + y, \beta x)$ , where  $\alpha$  and  $\beta$  are parameters. If we set  $y = 0, \beta = 1$  and  $x = t$ , then  $f(x, y) = f(t, 0) = (1 - \alpha t^2, t)$ . Thus the image of the real line under the Henon map is the parabola whose parametric equations are  $x = 1 - \alpha x^2, y = t$ .

## 2. FEATURES OF THE HENON MAP

In this section we will study the important features of the Henon map. The next theorem gives us the eigenvalues of the differential [15] of  $f(x, y)$ .

**2.1 Theorem:** *If  $2\alpha x^2 + \beta \geq 0$ , then the eigenvalues of the differential  $D[f(x, y)]$  of  $f(x, y)$  are real and given by  $-\alpha x \pm \sqrt{\alpha^2 x^2 + \beta}$ . The mapping  $f(x, y)$  is area contracting [10, 11] if  $0 \leq \beta < 1$*

**Proof:** The Henon map  $f: R^2 \rightarrow R^2$  is defined by  $f(x, y) = (1 - \alpha x^2 + y, \beta x)$ , where  $\alpha$  and  $\beta$  are parameters. We can write



$$f(x, y) = (1 - \alpha x^2 + y, \beta x) = (f_1(x, y), f_2(x, y)),$$

where  $f_1(x, y) = 1 - \alpha x^2 + y$  and  $f_2(x, y) = \beta x$ .

Hence the differential of  $f$  at the point  $(x, y)$  is given by the matrix

$$\begin{aligned} D[f(x, y)] &= \begin{bmatrix} \frac{\partial f_1}{\partial x} & \frac{\partial f_1}{\partial y} \\ \frac{\partial f_2}{\partial x} & \frac{\partial f_2}{\partial y} \end{bmatrix} \\ &= \begin{bmatrix} -2\alpha x & 1 \\ \beta & 0 \end{bmatrix} \end{aligned}$$

The eigenvalues of the differential  $D[f(x, y)]$  of  $f(x, y)$  are given by

$$\det. (D[f(x, y)] - \lambda I) = 0$$

Hence

$$\begin{vmatrix} -2\alpha x - \lambda & 1 \\ \beta & -\lambda \end{vmatrix} = 0$$

$$\Rightarrow \lambda^2 + 2\alpha x \lambda - \beta = 0$$

$$\Rightarrow \lambda = \frac{-2\alpha x \pm \sqrt{4\alpha^2 x^2 + 4\beta}}{2} = -\alpha x \pm \sqrt{\alpha^2 x^2 + \beta}$$

Thus the eigenvalues are real if  $\alpha^2 x^2 + \beta \geq 0$ .

The Jacobian of  $f(x, y)$  is given by

$$J = \det. (D[f(x, y)]) = \begin{vmatrix} -2\alpha x & 1 \\ \beta & 0 \end{vmatrix} = 0 - \beta = -\beta, \text{ which is a constant.}$$

Hence the mapping  $f(x, y)$  is area contracting if  $0 \leq \beta < 1$ .

This completes the proof.

■



## 2.2 Fixed points of the Henon Map

Now we will obtain the fixed points [12] of the Henon map and study their stability [13]. The fixed points of  $f(x, y)$  are obtained by solving the equation  $f(x, y) = (x, y)$ , which gives

$$1 - \alpha x^2 + y = x, \quad \beta x = y$$

$$\Rightarrow 1 - \alpha x^2 + \beta x = x$$

$$\Rightarrow 1 - \alpha x^2 + (\beta - 1)x = 0$$

$$\Rightarrow \alpha x^2 + (1 - \beta)x - 1 = 0$$

$$\Rightarrow x = \frac{-(1 - \beta) \pm \sqrt{(1 - \beta)^2 + 4\alpha}}{2\alpha}$$

$$\Rightarrow x = \frac{1}{2\alpha} \left[ \beta - 1 \pm \sqrt{(1 - \beta)^2 + 4\alpha} \right], \quad \alpha \neq 0$$

Such an  $x$  exists if  $(1 - \beta)^2 + 4\alpha \geq 0$  i.e.  $\alpha \geq \frac{-1}{4}(1 - \beta)^2$ .

Thus the fixed points are given by  $P \equiv \left( \frac{1}{2\alpha} [\beta - 1 + \sqrt{(1 - \beta)^2 + 4\alpha}], \frac{\beta}{2\alpha} [\beta - 1 + \sqrt{(1 - \beta)^2 + 4\alpha}] \right)$  and

$$Q \equiv \left( \frac{1}{2\alpha} [\beta - 1 - \sqrt{(1 - \beta)^2 + 4\alpha}], \frac{\beta}{2\alpha} [\beta - 1 - \sqrt{(1 - \beta)^2 + 4\alpha}] \right)$$

where  $\alpha \geq \frac{-1}{4}(1 - \beta)^2$ .

**2.3 Theorem:** If  $\alpha \in \left( \frac{-(1-\beta)^2}{4}, \frac{3(1-\beta)^2}{4} \right) = I$ , then the fixed point  $P \equiv \left( \frac{1}{2\alpha} [\beta - 1 + \sqrt{(1 - \beta)^2 + 4\alpha}], \frac{\beta}{2\alpha} [\beta - 1 + \sqrt{(1 - \beta)^2 + 4\alpha}] \right)$  is an attracting fixed point and  $Q \equiv \left( \frac{1}{2\alpha} [\beta - 1 - \sqrt{(1 - \beta)^2 + 4\alpha}], \frac{\beta}{2\alpha} [\beta - 1 - \sqrt{(1 - \beta)^2 + 4\alpha}] \right)$  is a saddle point [14] of the Henon map  $f(x, y)$ .

**Proof:** Let  $P \equiv (p_1, p_2)$ , where  $p_1 = \frac{1}{2\alpha} [\beta - 1 + \sqrt{(1 - \beta)^2 + 4\alpha}]$  and



$$p_2 = \frac{\beta}{2\alpha} \left[ \beta - 1 + \sqrt{(1-\beta)^2 + 4\alpha} \right]$$

As  $\sqrt{(1-\beta)^2 + 4\alpha} > 0$ , it follows that  $2\alpha p_1 > \beta - 1$  i.e.  $2\alpha p_1 + 1 > \beta$ .

Now assume that  $\alpha \in \left( \frac{-(1-\beta)^2}{4}, \frac{3(1-\beta)^2}{4} \right) = I$  so that  $\frac{-(1-\beta)^2}{4} < \alpha$

$\Rightarrow 4\alpha + (1-\beta)^2 > 0$ . This proves that  $p_1$  is not an imaginary number. Hence  $p_1^2 \geq 0$

Also, we have

$$(\alpha p_1 + 1)^2 = \alpha^2 p_1^2 + 2\alpha p_1 + 1 > \alpha^2 p_1^2 + \beta > 0$$

$$\Rightarrow \alpha p_1 + 1 > \sqrt{\alpha^2 p_1^2 + \beta}$$

$$\Rightarrow -\alpha p_1 + \sqrt{\alpha^2 p_1^2 + \beta} < 1$$

Thus we have proved that  $0 \leq -\alpha p_1 + \sqrt{\alpha^2 p_1^2 + \beta} < 1$

Similarly by assuming that  $\alpha < \frac{3(1-\beta)^2}{4}$ , it can be proved that  $-1 < -\alpha p_1 - \sqrt{\alpha^2 p_1^2 + \beta} < 0$

Combining these two statements, we have  $|\alpha p_1 \pm \sqrt{\alpha^2 p_1^2 + \beta}| < 1$

We know that the eigenvalues of the matrix

$$D[f(x, y)] = \begin{bmatrix} \frac{\partial f_1}{\partial x} & \frac{\partial f_1}{\partial y} \\ \frac{\partial f_2}{\partial x} & \frac{\partial f_2}{\partial y} \end{bmatrix} = \begin{bmatrix} -2\alpha x & 1 \\ \beta & 0 \end{bmatrix}$$

are given by  $\lambda = -\alpha x \pm \sqrt{\alpha^2 x^2 + \beta}$ . Hence at the point  $P \equiv (p_1, p_2)$ ,

$$|\lambda| = |-\alpha p_1 \pm \sqrt{\alpha^2 p_1^2 + \beta}| < 1.$$

This proves that the fixed point  $P \equiv \left( \frac{1}{2\alpha} [\beta - 1 + \sqrt{(1-\beta)^2 + 4\alpha}], \frac{\beta}{2\alpha} [\beta - 1 + \sqrt{(1-\beta)^2 + 4\alpha}] \right)$  is an attracting fixed point of the Henon map if  $\alpha \in \left( \frac{-(1-\beta)^2}{4}, \frac{3(1-\beta)^2}{4} \right) = I$ .



Similarly, it can be proved that  $Q \equiv \left( \frac{1}{2\alpha} [\beta - 1 - \sqrt{(1 - \beta)^2 + 4\alpha}], \frac{\beta}{2\alpha} [\beta - 1 - \sqrt{(1 - \beta)^2 + 4\alpha}] \right)$  is a saddle point of the Henon map  $f(x, y)$ .

This completes the proof.

■

#### 2.4 Period doubling cascade in the Henon Map

From the above theorem it follows that the points  $\frac{-(1-\beta)^2}{4}$  and  $\frac{3(1-\beta)^2}{4}$  are bifurcation points for the Henon map, where  $0 < \beta < 1$ . As the value of the parameter  $\alpha$  becomes greater than  $\frac{3(1-\beta)^2}{4}$ , an attracting 2-cycle is observed for the Henon map. The attracting period 2-cycle can be obtained by solving the equation

$[f \circ f](x, y) = (1 - \alpha(1 - \alpha x^2 + y)^2 + \beta x, \beta(1 - \alpha x^2 + y))$ , which is a fourth degree equation. It can be proved that  $f(x, y)$  has a period doubling bifurcation at the parameter value  $\alpha = \frac{3(1-\beta)^2}{4}$ . As the values of the parameter  $\alpha$  increases further, the attracting period 4-cycle, period 8-cycle, period 16-cycle, etc are observed. For the fixed value  $\beta = 0.4$ , a period 1-cycle is observed for  $\alpha = 0.2$ , a period 2-cycle is observed for  $\alpha = 0.5$ , a period 4-cycle is observed for  $\alpha = 0.9$  and so on. As  $\alpha$  becomes greater than 1.01, this period doubling behavior is not observed, but in fact an unpredictability of the iteration values is noted.

#### 2.5 Strange attractor of the Henon Map

For  $\alpha = 1.2$  and  $\beta = 0.4$ , we have plotted the 6000 iterates of the Henon map and obtained the curve as shown in the figure 1.

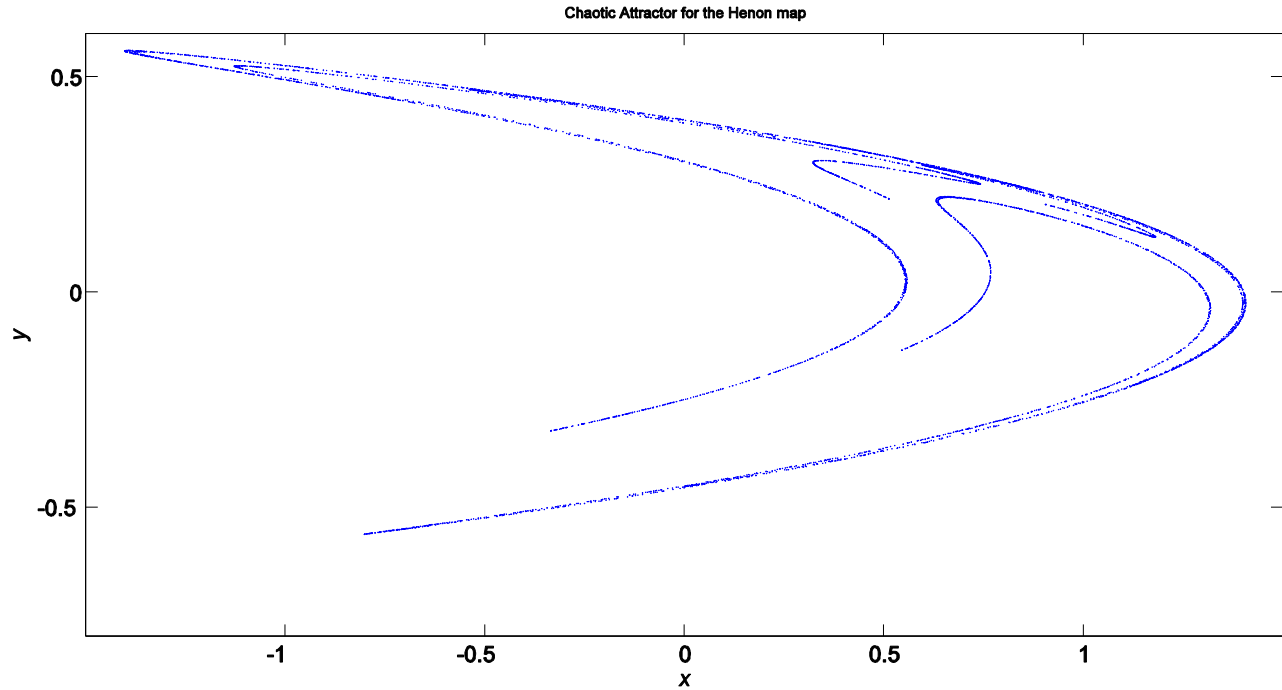
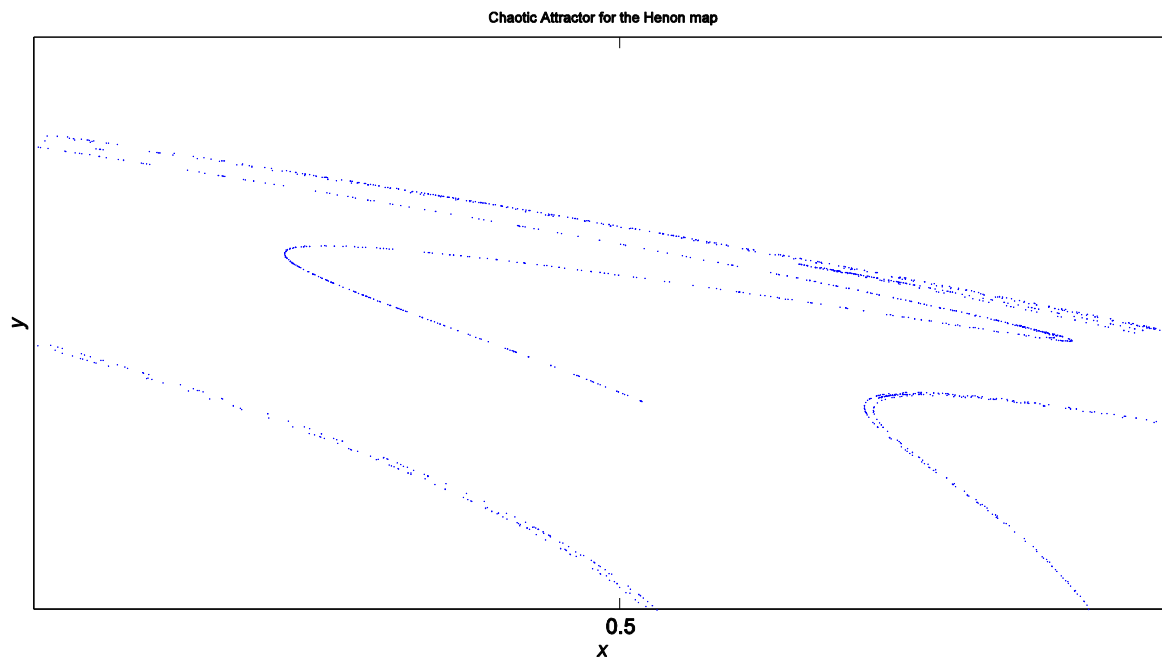


Figure 1

With simple eyes, the curve in the figure 1 appears to be a simple 2-dimensional curve, but what makes it special is that if we zoom in on a small portion of the curve, we see that the curve has the exactly same pattern as the original one. This can be observed from the figure 2 which is the zoom in of the curve in the figure 1.

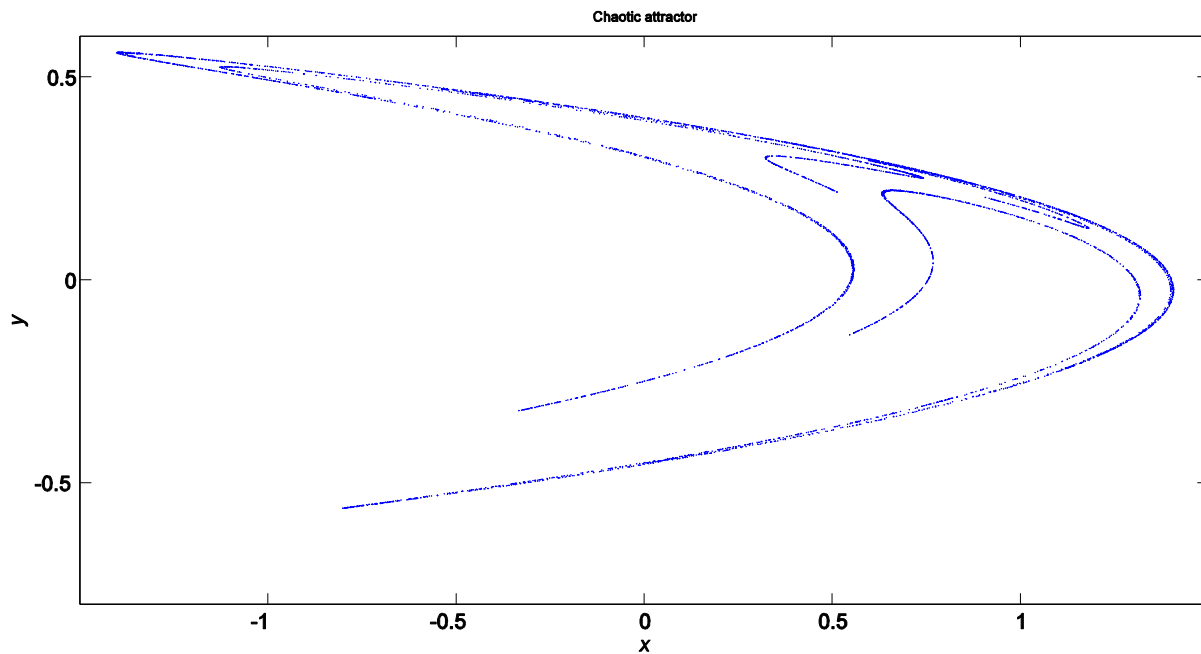






**Figure 2**

This proves that the iterates repeat themselves around the attracting fixed point. Thus the curve in the figure is a Cantor like set which has a fractal dimension. Also, the second specialty of the curve is that it has a sensitive dependence on the initial conditions. The curve as shown in the figure 1 is obtained for the initial values  $(x_0, y_0) = (0.1, 0)$ . The curve with another set of initial conditions  $(x_0, y_0) = (0.1, 0.1)$ , which is quite close to the first one is as shown in the figure 3.



**Figure 3**

The sensitive dependence on initial conditions can be observed from the figure 1 and figure 3. This type of attractor that has sensitive dependence on the initial conditions is called as the *chaotic attractor* or a *strange attractor* and the mapping or the system in this case is called as the chaotic system.

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# TECHNICAL SHEET ON GLYCEMIC INDEX OF SOME STREET FOODS PREPARED FROM PLANTAIN IN CLIMATE CHANGE CONTEXT

**Kouamé Adam Camille<sup>1\*</sup>, Adou Marc<sup>2</sup>, Amani N'guessan Georges<sup>2</sup>**

<sup>1</sup>National Centre for Agricultural Research (CNRA), Bouaké Regional Office,  
P.O. box 633 Bouaké 01, Bouaké, Côte d'Ivoire

<sup>2</sup>Department of Food Science and Technology, Laboratory of Food Biochemistry and Tropical Products Technology, Nutrition and Food Safety Section; University Nangui Abrogoua;  
02 BP 801 Abidjan 02, Abidjan, Côte d'Ivoire.,

\*Correspondence Author: Kouamé Adam Camille

## ABSTRACT

*Among many varieties of plantain with agronomic performance produced in Côte d'Ivoire, only three are the most cultivated because there are more resistant to climate change. There are used for up to ten preferred staple foods in which four are currently consumed notably in urban area. So, this study was focused to determine glycemic index (GI) and glycemic load (GL) of preferred foods based on these plantain so as to provide a nutritional guideline in climate change context. Excepted Roasted plantain with a high GI (GI = 89), findings showed that the most of urban area foods based on plantain have low GI with the values of 44, 39 and 45 for Klaclo, Alogo (aag6), Alogo (aag7) and Chips respectively. But their consumption should be reduced because of their GL which is up to 10. These data are very important for medical organizations and showed that climate change could affect public health in Côte d'Ivoire urban area.*

**KEYWORDS:** Plantain, resistant varieties, urban foods, glycemic index, Côte d'Ivoire

## I. INTRODUCTION

Climate change represents a major threat for the coming decades, particularly in Africa which has more climate sensitive economies than any other continent. These changes in climates and environments will force households to adapt their livelihood strategies and diversify their asset base to survive and thrive. More than 70 million people in Africa depend on banana and plantain for food. These major food staples and cash crops are important in the rural and urban economy, and social and cultural life in sub-Saharan Africa (SSA). In Côte d'Ivoire, climate changes has a direct impact on plantain (*Musa sp*) production, through rising temperatures and changing rainfall patterns and seasons. Plantain yields, however, have been seriously declining, threatening food security and the livelihoods of millions of subsistence farmers and their families. Declining yields have been attributed climate changes as a result of decreases in the areas suitable for agriculture. Indeed plantain was grown in many parts of the country with several varieties. But now, plantain is grown mostly by smallholder

farmers in both the East zone and the West humid lowlands for cooking. Among varieties existing, only three plantain (*Musa sp*) varieties are available because they are resisting to the increase of temperature due to climate changes. And in the food system of Côte d'Ivoire, preparation and consumption of plantain causing greater instability in the food supply. The phenomenon of climate changes is having a profound impact on food security affecting food availability, access, uses and stability of the food system, thereby impacting nutrition security. Ensuring that good quality and nutritious food is available and affordable is also one of the key factors for reducing the growing threat of Non-Communicable Diseases (NCDs), such as heart disease, stroke, cancer, and diabetes. And GI has been incorporated into food frequency questionnaire-based assessments of usual diet in large epidemiological studies and should be an important consideration in the dietary management and prevention of obesity and chronic diseases.

These results led to the publication of an article in the peer-reviewed journal "foods" peer-



reviewed journal in September 2017: Glycemic Responses, Glycemic Index, and Glycemic Load Values of Some Street Foods Prepared from Plantain (*Musa spp.*, AAB Genome) in Côte d'Ivoire' (Kouamé et al., 2017).

### Objectives

The purpose of this study is to provide a nutritional guideline based on glycemic index of plantain staple foods in urban area in climate change context.

## II. MATERIAL AND METHODS

The glycemic index protocol was based on FAO recommendations (FAO/WHO, 2010) and ISO 26642: 2010 (ISO/FDIS 26642:2010; 2010). Randomization was established according to the suggestions of Brouns (Brouns et al., 2005).

- **Subjects (Table 1)**
  - 50 healthy subjects (23 women and 27 men),
- **Design**
  - Randomized cross-over study,
  - 7 tests Periods.
- **Calculation of glycemic index and glycemic Load**
  - $GI = (iAUC \text{ test food} / iAUC \text{ reference food}) \times 100$  (1)
  - $GI = (iAUC \text{ test food} / iAUC \text{ reference food}) \times 100$  (2)
- **Methodology**
  - After overnight fasting, subjects ingested either 50 grams of Glucose pur anhydre or test foods.
  - The glycaemia were observed for 2 hours.
  - Blood was sampled at 0 (time of ingestion of the product), 15, 30, 45, 60, 90, 120 min.

## III. RESULTS AND DISCUSSION

Proximate composition of tested foods is shown in Table 2. The GI/GL values and classifications for each test meal are given in Table 3. Fried plantain “Aloco” prepared from fruits at two stages of maturity -the full yellow stage (aag6) and the full yellow with black spots (aag7), fritters plantain “Klacro” from fruit at the black stage of maturity (kam8) and plantain chips from the green stage (Cam1) are low-glycemic foods contrary to charcoal-roasted “Banane braisée” from the light green stage of maturity (raf2).

## IV. CONCLUSION AND RECOMMENDATION

Climate changes modify consumption patterns in urban area of Côte d'Ivoire and could provoke metabolic disorders such as diabetes mellitus. According to data (Table 3), even if the most preferred staple foods based on plantain (Klacro, Aloco Chips) have low GI ( $GI \leq 55$ ), their consumption must be limited because their GL is intermediate ( $10 < GL < 20$ ). This is why, for a better control of glycemic response on diabetes mellitus management and its prevention, GI data must be associated to GL data. In the food system of Côte d'Ivoire, it's important to integrate these data in diet. These guidelines should help to find the needed balance between nutrition and climate change in Côte d'Ivoire

*This information is intended as a guide only. It should not replace individual medical advice. If you have any concerns about your health, or further questions, you should contact your health professional.*

## FIGURES, TABLES AND REFERENCES

**Table 1. Baseline Clinical and Anthropometric Characteristics (mean ± s.e.m.) of subjects (n = 30) involved in the study**

| Parameters               | Sample |        |             |
|--------------------------|--------|--------|-------------|
|                          | Mean   | s.e.m. | Range       |
| Age (years)              | 30     | 0.5    | 25 - 35     |
| Gender (male/female)     | 23/7   | -      | -           |
| Body weight (kg)         | 63.3   | 1.3    | 47 - 74     |
| Height (m)               | 1.7    | 0.0    | 1.6 – 1.9   |
| BMI (kg/m <sup>2</sup> ) | 21.2   | 0.3    | 18.1 – 24.6 |
| Fasting glucose (mmol/L) | 4.6    | 0.1    | 4.1 – 7     |
| HbA1c (%)                | 3.0    | 0.1    | 2.1 – 4.0   |
| Systolic BP (mmHg)       | 107.7  | 1.7    | 90 - 120    |
| Diastolic BP (mmHg)      | 73.0   | 1.3    | 60 - 90     |





**Abbreviation:** BMI = body mass index, HbA1c = hemoglobin A1c, BP = Blood pressure

**Table 2: Proximate Composition of Street Foods Prepared from Plantain**

| Food Samples                  | Roasted plantain        | Klalo                   | Aloco (aag6)            | Aloco (aag7)            | Chips                   |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Dry matter (g/100 g)          | 44.5 ± 0.1 <sup>d</sup> | 63.7 ± 0.1 <sup>b</sup> | 66.2 ± 0.0 <sup>c</sup> | 63.6 ± 0.0 <sup>b</sup> | 66.4 ± 0.1 <sup>a</sup> |
| Ash (g/100 g)                 | 1.4 ± 0.0 <sup>c</sup>  | 1.1 ± 0.0 <sup>d</sup>  | 1.0 ± 0.0 <sup>e</sup>  | 1.5 ± 0.0 <sup>b</sup>  | 2.0 ± 0.0 <sup>a</sup>  |
| Proteins (g/100 g)            | 5.3 ± 0.0 <sup>c</sup>  | 6.1 ± 0.0 <sup>b</sup>  | 8.8 ± 0.0 <sup>a</sup>  | 4.4 ± 0.0 <sup>d</sup>  | 5.3 ± 0.0 <sup>c</sup>  |
| Lipids (g/100 g)              | 0.3 ± 0.1 <sup>e</sup>  | 14.1 ± 0.2 <sup>a</sup> | 12.4 ± 0.0 <sup>b</sup> | 11.6 ± 0.1 <sup>c</sup> | 10.9 ± 0.0 <sup>d</sup> |
| Total CHO (g/100 g)**         | 93.1 ± 0.1 <sup>a</sup> | 78.7 ± 0.2 <sup>d</sup> | 78 ± 0.0 <sup>e</sup>   | 82.6 ± 0.1 <sup>b</sup> | 81.9 ± 0.1 <sup>c</sup> |
| Total dietary fiber (g/100 g) | 1.7 ± 0.0 <sup>a</sup>  | 1.6 ± 0.0 <sup>b</sup>  | 1.6 ± 0.0 <sup>ba</sup> | 1.6 ± 0.0 <sup>ba</sup> | 1.7 ± 0.0 <sup>a</sup>  |

Data are expressed on dry matter basis. Data in the same row with different superscript letter are significantly different ( $p < 0.05$ ) as assessed by Tukey's test. \*\*Calculated by difference

**Table 3. Glycemic Index and Glycemic Load Values of Street Foods Prepared from Plantain**

| Foods                                                                                                            | GI | GI International classification <sup>1</sup> | GI Category | GL | GL classification <sup>2</sup> | GL Category  | Recommendation (maximum daily consumption) |
|------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------|-------------|----|--------------------------------|--------------|--------------------------------------------|
| <br>Roasted of AAB, True Horn  | 89 | IG > 70                                      | High        | 28 | CG > 20                        | High         | 200 - 355 g                                |
| <br>Friter of AAB, French     | 44 | IG ≤ 55                                      | Low         | 19 | 10 ≤ CG < 20                   | intermediate | 300 - 450 g                                |
| <br>Fried of AAB, French Horn | 38 | IG ≤ 55                                      | Low         | 18 | 10 ≤ CG < 20                   | intermediate | 300 - 450 g                                |
| <br>Chips of AAB, French      | 45 | IG ≤ 55                                      | Low         | 21 | CG > 20                        | High         | 100 - 360 g                                |

GI = Glycemic Index; GL = Glycemic Load; 1 Glycemic indexes were classified as high ( $\geq 70$ ), medium (56–69), and low ( $\leq 55$ ); 2 Glycemic loads were classified as high ( $\geq 20$ ), medium (11–19), and low ( $\leq 10$ ) ([www.glycemicindex.com](http://www.glycemicindex.com)).



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# TECHNICAL SHEET ON DATA MANAGEMENT FOR THE CENTER'S HEALTHY AND SUSTAINABLE FOOD PROGRAM OF COTE D'IVOIRE: GLYCAEMIC INDEX AND LOAD VALUES OF STAPLE FOODSTUFFS

**Kouamé Adam Camille<sup>1\*</sup>, N'Dri Yao Denis<sup>2</sup>, Amani N'guessan Georges<sup>2</sup>**

<sup>1</sup>National Centre for Agricultural Research (CNRA), Bouaké Regional Office,  
P.O. box 633 Bouaké 01, Bouaké, Côte d'Ivoire

<sup>2</sup>Department of Food Science and Technology, Laboratory of Food Biochemistry and Tropical Products Technology, Nutrition and Food Safety Section; University Nangui Abrogoua;  
02 BP 801 Abidjan 02, Abidjan, Côte d'Ivoire.,

\*Correspondence Author: Kouamé Adam Camille

## ABSTRACT

There is currently an increased global interest in the published glycaemic index (GI) and glycaemic load (GL) values of foods. At the same time, the Center's Healthy and Sustainable Food program of developing countries such as Côte d'Ivoire, have unfortunately, very limited data on our choices for diet. Thus, the study therefore aimed at finding the GI and GL (two nutrition indicators) of the main food staples in Côte d'Ivoire. Such data would be of prime importance for the policy makers of the Ivorian Ministry of Health and Public Hygiene in order to promote the sustainable consumption by the healthy consumers.

**KEYWORDS:** Cote d'Ivoire, Foodstuffs, glycaemic Index, glycemic Load, sustainable consumption

## I. INTRODUCTION

The food we eat determines how healthy we are; however, our food may do more harm than good. The Center's Healthy and Sustainable Food program of developing countries, such as Côte d'Ivoire, have, unfortunately, very limited data on choices for diet. Yam (tubers), plantain (fruits), cassava (roots) and maize (cereals) are considered as the main carbohydrate sources in Ivorian diets (Amani and Kamenan, 2003) and the determination of the glycemic responses of these foods in the calculation of the glycemic index and glycemic load is therefore necessary given its role in the dietary management of sugar-related diseases. These data would be of paramount importance to decision makers at the Ivorian Ministry of Health and Public Hygiene, which is constantly promoting sustainable consumption by healthy consumers. These data led to the publication of an article in the Journal Nutrients in 2015 (Kouamé et al., 2015) "Glycaemic index and load values tested in normoglycemic adults for five staple foodstuffs: pounded yam, pounded cassava-plantain, placali, attieke and maize meal stiff porridge.

## II. MATERIAL AND METHODS

### 1. Reference methods

The glycemic index protocol was based on FAO recommendations (FAO/WHO, 2010) and ISO 26642: 2010 (ISO/FDIS 26642:2010; 2010). Randomization was established according to the suggestions of Brouns (Brouns et al., 2005).

### 2. Subjects

50 healthy subjects (23 women and 27 men)

Mean Age: 28 years,

Mean BMI: 21.5 kg/m<sup>2</sup>,



Mean fasting blood glucose: 4.6 mmol/L,  
Mean HDL: 0.4 mmol/L.

### 3. Design

Randomized cross-over study,  
7 tests periods.

### 4. Methodology

After overnight fasting, subjects ingested either 50 grams of Glucose pur anhydre or test foods.  
The glycaemia were observed for 2 hours.  
Blood was sampled at 0 (time of ingestion of the product), 15, 30, 45, 60, 90, 120 min.

### 5. Calculation of glycemic index and glycemic Load

$GI = (iAUC \text{ test food} / iAUC \text{ reference food}) \times 100$  (Figure 1)  
with iAUC = Incremental AUC ignoring area under the baseline (method C, Figure 2).  
We recommend calculating GI as the mean of the individual ratios  
 $GL = (GI \times \text{grams of CHO in the typical serving size}) / 100$

### 6. Evaluation of calculating area under the curve (AUC) for determining glycemic index (GI) values of foods

Figure 1 illustrate the calculation of incremental AUC (Brouns et al., 2005).

### 7. Experimental Diets

#### 7.1: Pounded yam or yam *fufu*

For pounded yam production, the tubers were peeled, cut into pieces and boiled until soft. The water is then drained off and the pieces pounded in a wooden mortar and pestle until stiff glutinous dough is formed, usually taking 15–30.

#### 7. 2: Attieke (a fermented cassava couscous)

The fresh mash is fermented for two or three days, mechanically squeezed in order to remove as much water as possible, granulated, sun-dried before sieving and finally steamed to get the final product *attieke*

#### 7.3: Pounded plantain or plantain *fufu* (pounded cassava mixed with pounded plantain).

Split the bananas in half and remove the core from the banana. Do the same for the cassava. Wash them and boil them in a litre of water for 40 minutes. Drain off the water and allow to cool. Then pound the bananas and cassava separately in a mortar, making sure you get a lump-free paste. Finally, mix the banana and manioc and pound them to obtain a smooth consistent paste. Make balls and serve in a dish

#### F4: Maize meal stiff porridge or *cabatôh*.

This is a traditional Ivorian recipe from a classic starchy staple made from corn dough boiled in water until it forms a stiff porridge-like paste. It is also known as *cabatôh* or *tôh de mais* and is made from cornmeal. The maize meal is prepared as follows: flour of maize (1.2 kg) obtained by pounding whole grains in a mortar, is poured into boiling water (3 L) and stirred until a solid paste is formed.

#### F 5: Placali (a fermented cassava paste)

Cassava are peeled, crushed and mixed with a small amount of fermented cassava. The paste obtained is fermented for one to two days and then sieved to remove fibers. The fermented dough is transformed into a gel called “placali” after simmering

## III. RESULTS AND DISCUSSION

Proximate composition, blood glucose response and glycaemic index/load to test meals (Table 1, 2, 3, 4 and 5)

## IV. NUTRITIONAL ADVICE AND RECOMMENDATIONS

- Yam (tubers), plantain (fruits), cassava (roots) and maize (cereals) are all excellent sources of carbohydrates. These are high energy foods.
- The majority of GI values of these meals (with the exception of *attieke*) is identified as high GI. These foods are not suitable or adequate meals for type II diabetics. That is why, on the basis of food consumption per day in respect to  $GL < 80$ , the consumption of placali, pounded cassava-plantain, pounded yam, *attieke* and maize meal stiff porridge should be limited to 1554 g, 500 g, 751 g, 207 g





and 313 g per day respectively regardless of their respective GI in order to avoid metabolic disturbance related to their overconsumption

- Consumption of attieke could minimize postprandial blood glucose spikes, in spite of high GL and potentially have benefit in the management and prevention of some chronic diseases.

*This information is intended as a guide only. It should not replace individual medical advice. If you have any concerns about your health, or further questions, you should contact your health professional.*

**FIGURES, TABLES AND REFERENCES**

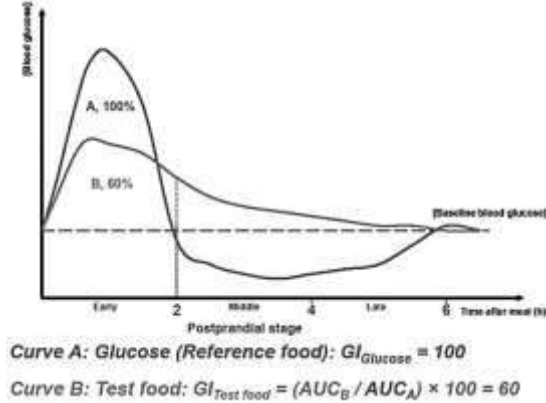


Figure 1: Glycemic responses demonstrate the definition of GI

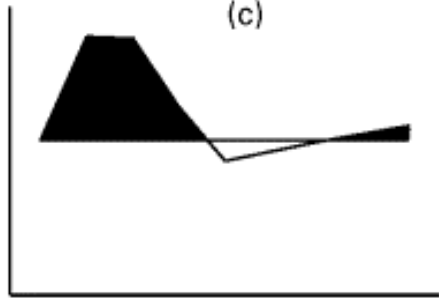
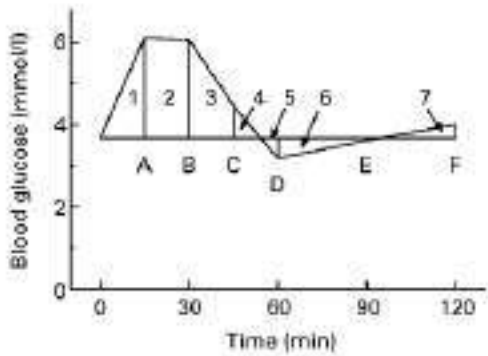


Figure 2: Method to determine iAUC. ;



- 1:  $A/2 \times 15 = 1.22 \times 15 = 18.30 \text{ mmol} \times \text{min/L}$ ;
- 2:  $(A/2 + B/2) \times 15 = (1.22 + 1.195) \times 15 = 36.23 \text{ mmol} \times \text{min/l}$ ;
- 3:  $(B/2 + C/2) \times 15 = (1.195 + 0.385) \times 15 = 23.70 \text{ mmol} \times \text{min/l}$ ;
- 4:  $(C^2 / (C - D)) \times 15 / 2 = [0.593 / (0.77 + 0.50)] \times 7.5 = 3.50 \text{ mmol} \times \text{min/l}$ ; 5 and 6: area below baseline not included, =0;
- 7:  $[F^2 / (F - E)] \times 30 / 2 = [0.109 / (0.33 + 0.06)] \times 15 = 4.19 \text{ mmol} \times \text{min/l}$ ;

**Incremental AUC** = 18.30 + 36.23 + 23.70 + 3.59 + 4.19 = 86.0.

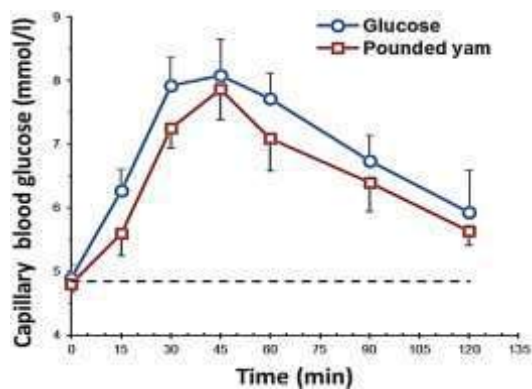
Figure 1: Calculation of incremental area under the curve



**Table 1. Pounded yam (*foutou igname*)**

|                                        |                                                                                    |
|----------------------------------------|------------------------------------------------------------------------------------|
| <b>Food Samples</b>                    |  |
| <b>Moisture (g/100 g)</b>              | 71.0 ± 0.0                                                                         |
| <b>Ashes (g/100 g)</b>                 | 0.8 ± 0.0                                                                          |
| <b>Total Dietary Fiber (g/100 g)</b>   | 0.6 ± 0.2                                                                          |
| <b>Proteins (g/100 g)</b>              | 1.5 ± 0.0                                                                          |
| <b>Lipids (g/100 g)</b>                | 0.8 ± 0.0                                                                          |
| <b>Available CHO (g/100 g) *</b>       | 25.3 ± 0.1                                                                         |
| <b>Energetic Value (kcal/100 g) **</b> | 114.3 ± 0.4                                                                        |

**Blood Glucose Response**



Evolution of glycaemia after ingestion of test foods  
 Values are the mean change in blood glucose (BG) with their standard deviation represented by vertical bars

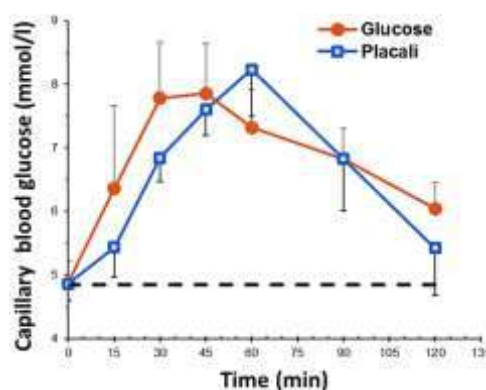
|                                                       |          |      |
|-------------------------------------------------------|----------|------|
| <b>GI<sup>1</sup> (Glucose = 100)<sup>1</sup></b>     | Mean     | 85   |
|                                                       | SE       | 4    |
|                                                       | Category | high |
| <b>GL<sup>2</sup> (per Experimental Portion Size)</b> | Mean     | 22   |
|                                                       | SE       | 1    |
|                                                       | Category | high |

Table 2. *Placali*

| Food Samples                    |            |
|---------------------------------|------------|
| Moisture (g/100 g)              | 81.0 ± 0.0 |
| Ashes (g/100 g)                 | 0.8 ± 0.0  |
| Total Dietary Fiber (g/100 g)   | 1.6 ± 0.1  |
| Proteins (g/100 g)              | 0.8 ± 0.0  |
| Lipids (g/100 g)                | 0.0 ± 0.0  |
| Available CHO (g/100 g) *       | 15.8 ± 0.1 |
| Energetic Value (kcal/100 g) ** | 66.5 ± 0.5 |



Blood Glucose Respon




Evolution of glycaemia after ingestion of test foods  
 Values are the mean change in blood glucose (BG) with their standard deviation represented by vertical bars

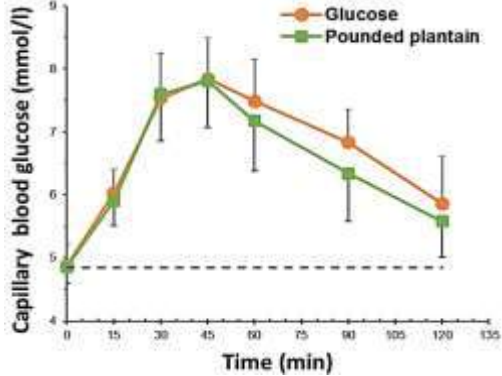
|                                                 |          |                  |
|-------------------------------------------------|----------|------------------|
| GI <sup>1</sup> (Glucose = 100) <sup>1</sup>    | Mean     | 106 <sup>a</sup> |
|                                                 | SE       | 5                |
|                                                 | Category | high             |
| GL <sup>2</sup> (per Experimental Portion Size) | Mean     | 17 <sup>de</sup> |
|                                                 | SE       | 1                |
|                                                 | Category | medium           |



**Table 3. Pounded cassava-plantain (*foutou banane*)**

| Food Samples                    |  |
|---------------------------------|------------------------------------------------------------------------------------|
| Moisture (g/100 g)              | 68.3 ± 0.2                                                                         |
| Ashes (g/100 g)                 | 0.2 ± 0.0                                                                          |
| Total Dietary Fiber (g/100 g)   | 0.6 ± 0.0                                                                          |
| Proteins (g/100 g)              | 1.7 ± 0.0                                                                          |
| Lipids (g/100 g)                | 0.4 ± 0.0                                                                          |
| Available CHO (g/100 g) *       | 28.8 ± 0.2                                                                         |
| Energetic Value (kcal/100 g) ** | 125.4 ± 0.3                                                                        |


**Blood Glucose Response**



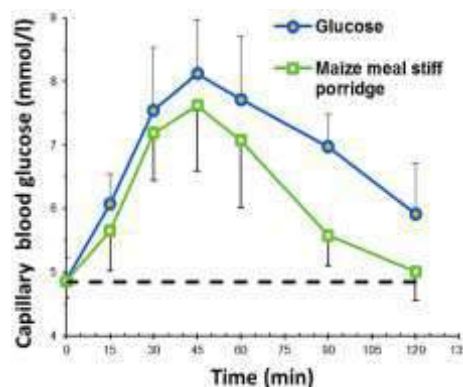
**Figure.** Evolution of glycaemia after ingestion of test foods  
 Values are the mean change in blood glucose (BG) with their standard deviation represented by vertical bars

|                                                 |          |      |
|-------------------------------------------------|----------|------|
| GI <sup>1</sup> (Glucose = 100) <sup>1</sup>    | Mean     | 91   |
|                                                 | SE       | 4    |
|                                                 | Category | high |
| GL <sup>2</sup> (per Experimental Portion Size) | Mean     | 26   |
|                                                 | SE       | 1    |
|                                                 | Category | high |

**Table 4. Maize meal stiff porridge (*Toh de maïs*)**

| Food Samples                    |  |
|---------------------------------|------------------------------------------------------------------------------------|
| Moisture (g/100 g)              | 73.4 ± 0.4                                                                         |
| Ashes (g/100 g)                 | 1.1 ± 0.1                                                                          |
| Total Dietary Fiber (g/100 g)   | 1.5 ± 0.1                                                                          |
| Proteins (g/100 g)              | 2.2 ± 0.1                                                                          |
| Lipids (g/100 g)                | 0.2 ± 0.0                                                                          |
| Available CHO (g/100 g) *       | 21.6 ± 0.4                                                                         |
| Energetic Value (kcal/100 g) ** | 97.0 ± 1.2                                                                         |

**Blood Glucose Response**



**Figure.** Evolution of glycaemia after ingestion of test foods  
 Values are the mean change in blood glucose (BG) with their standard deviation represented by vertical bars

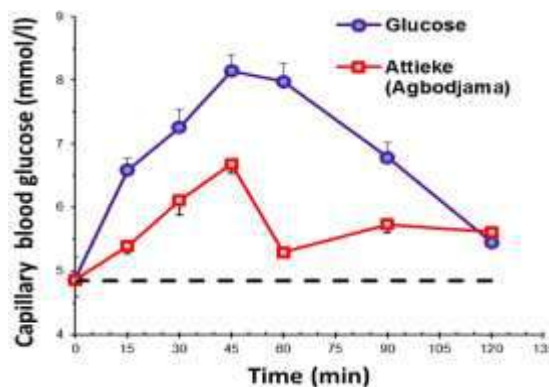
|                                                 |          |        |
|-------------------------------------------------|----------|--------|
| GI <sup>1</sup> (Glucose = 100) <sup>1</sup>    | Mean     | 74     |
|                                                 | SE       | 5      |
|                                                 | Category | high   |
| GL <sup>2</sup> (per Experimental Portion Size) | Mean     | 16     |
|                                                 | SE       | 1      |
|                                                 | Category | medium |

Table 5. Attieke

| Food Samples                    |             |
|---------------------------------|-------------|
| Moisture (g/100 g)              | 51.2 ± 1.7  |
| Ashes (g/100 g)                 | 0.7 ± 0.0   |
| Total Dietary Fiber (g/100 g)   | 0.2 ± 0.0   |
| Proteins (g/100 g)              | 0.4 ± 0.0   |
| Lipids (g/100 g)                | 1.3 ± 0.0   |
| Available CHO (g/100 g) *       | 46.2 ± 1.7  |
| Energetic Value (kcal/100 g) ** | 198.1 ± 6.6 |



**Blood Glucose Response**



**Figure.** Evolution of glycaemia after ingestion of test foods  
 Values are the mean change in blood glucose (BG) with their standard deviation represented by vertical bars

|                                                 |          |                 |
|-------------------------------------------------|----------|-----------------|
| GI <sup>1</sup> (Glucose = 100) <sup>1</sup>    | Mean     | 63 <sup>c</sup> |
|                                                 | SE       | 2               |
|                                                 | Category | medium          |
| GL <sup>2</sup> (per Experimental Portion Size) | Mean     | 29 <sup>b</sup> |
|                                                 | SE       | 1               |
|                                                 | Category | high            |

<sup>1</sup> Level of glycaemic indexes (GIs) were classified according to high (>69), medium (56–69 inclusive) and low (<56) GI

<sup>2</sup> Level of glycaemic loads (GLs) were classified as high (≥20), medium (>10 to <20), and low (≤10) GL; 3 glucose was used as reference food and was defined as 100.

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## NURSERY RHYMES AS A MEANS OF UPBRINGING CHILDREN IN KARAKALPAK CHILDREN'S FOLKLORE

Abdalieva Periuza Isaevna<sup>1</sup>, Amirlan Seydin Elsuyer uli<sup>2</sup>

Department of General pedagogy and psychology  
Nukus State Pedagogical Institute  
Nukus, Karakalpakstan, Uzbekistan

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### ABSTRACT

The article deals with the importance of nursery rhymes as a means of upbringing children in Karakalpak children's folklore. In the article, Karakalpak, Kazakh and Kyrgyz children's folklore have been analyzed. Descriptive and comparative methods analyzes are used in this paper. Also, some examples of nursery rhymes from Karakalpak children's folklore have been analyzed and their meanings are explained in the English language.

**KEY WORDS:** upbringing, Karakalpak, children's folklore, nursery rhymes.

### INTRODUCTION

In many periods, children's folklore reflects experienced by humanity, and currently, it also constitutes a set of existing genres. In the field of folklore studies of the peoples of the world, creations dedicated to children and performed by them are the main core for significant research and are studied on a large scale. Especially, the importance of the genre in the development of the art of words is determined by considering in the composition of affectionate-poetic samples – jokes that are the leader of children's verbal games [5, p. 46-51]. In the children's folklore of the peoples of Central Asia, nursery rhymes (jokes) were first analyzed in the studies of O. Safarov, they began to be called "qiziqmachoqlar". In Kazakh folklore studies, this genre is studied under the names "suramaqtar" or "qiziqtamalar". And in the Kyrgyz children's folklore they are called "suroo-joop aytymdar". The researcher of Karakalpak children's literature I. Kurbanbayev calls such samples as "children's entertainment and play songs".

Nursery rhymes are used to attract children to entertaining games, increase the ability to memorize and interest in the art of words, and they are one of the existing genres in Karakalpak folklore. Previously, this genre was called "sawiqklamalar". In folk art, the word "sawik" meant "entertainment", "fun", "performance". In the explanatory dictionary, meanings close to this are given [4, p. 187].

Basically, the Karakalpak name of this genre "sawiqklamalar", consisting of interesting questions and answers, and it has similar grounds and its formation as children's creativity has been determined for centuries.

### LITERATURE REVIEW

Nursery rhymes in the Karakalpak folklore "Ha'kke qayda?", "Tu'lkishek", "G'aq, g'aq – g'arg'alar!", "Tu'ye, tu'ye – tu'yeler" are multivariate and widespread examples of the nursery rhymes genre. In addition to helping parents, to learn by heart, children themselves can easily memorize the texts of nursery rhymes. A striking example of this is the number of created national versions of the genre. The main feature of jokes is rhyming questions and answers. Since the events in them are built on short plots, they resemble small fairy tales. Taking into consideration of these aspects, a famous Tatar folklorist N. Isanbet called them "fairy-tale-like". The consistent presentation of such a play on words not only awakens the interest of children, but also makes them think for themselves, broadens their horizons. With the help of memorization and repetition of nursery rhymes, children will communicate with nature, and they can get acquainted with the world of animals.

Sometimes they speak directly to insects, for example: "Gu'belek, gu'belek!", "Qon'izaq, Qon'izaq!", "Qumirsqa, qumirsqa", "Miltiqshi,





*multiqshi*”, “*Xanqizi, xanqizi*” and communicate with them in private, but with living beings whom they have never met with the help of a third person. In the nursery rhyme “*Ha’kke qayda?*” this situation that catches the eye can be seen:

- *Ha’kke qayda? (Where is the bird (ha’kke is a kind of bird?)*
- *Uyasinda. (In the nest)*
- *Neg’ip otir?(What is it doing?)*
- *Keste tigip otir. (Embroidering)*
- *Kestesiqanday?(Whatkind of embroidery?)*
- *Alaqaunday... . (From the palm of your hand).*

It is these actions of the bird that make children think, especially girls. They are reminded that they should not just sit at home spending idle time, they should be busy with doing something, or help their parents to do some work around the house. This nursery rhyme later turned into a children’s outdoor game [6, p. 12]. And the reason for this is that N. Davkaraev “*Children’s song*”, K. Ayimbetov’s “*Children’s game*” is precisely in this [3, p. 137; 1, p. 49].

## RESULTS AND DISCUSSION

If we consider and look closely at the simple and short examples of traditional nursery rhymes, we can see that they appeared on the basis of a conversation between parents and children. A striking example of this is the joke “*Ha’kke qayda?*”, which is very popular among the nursery rhymes performed by mothers. And nursery rhyme, known as “*Tu’lkishek*”, has been considered the most versatile artistic examples of this genre, for example:

- *Túlki, túlki – túlkishek! (Fox, fox)*
- *Túnde qayda baramız? (Where will we go at night?)*
- *Mamam úyine baramız. (We will go to grandma's home)*
- *Mamañ bizge ne berer? (What will grandma give us?)*
- *Eshki sawıp súp berer. (She will give us goat milk)*
- *Serke soyıp et berer. (She will slaughter a goat, give meat)*
- *Onı qayda qoyamız? (Where do we put it?)*
- *Tal túbine qoyamız. (We will put under the tree)*
- *Iyt áketse qáytemiz? (What if the dogs take away?)*
- *Iyt awzınan alamız. (We will take it from the dog)*
- *Qus áketse qáytemiz? (What if the bird carries away?)*
- *Qus awzınan alamız. (We will take it from the bird)*

- *Qumğa tússe qáytemiz? (What if we drop it on the sand?)*
- *Qağıp-qağıp juwamız. (We will shake it off and wash it)*
- *Suwğa tússe qáytemiz? (What if we drop it in water?)*
- *Suw astınan tawamız. (We will get it out from under the water)*
- *Ağıp ketse qáytemiz? (And if carried away by the flow?)*
- *Qayıqqa minip quwamız. (We will catch up on the boat)*
- *Jetkizbese qáytemiz? (And if we don’t catch up?)*
- *Balıqqa minip quwamız! (We will catch up on fish!)*

Most of the nursery rhymes called “*Tu’lkishek*” end so interestingly. The transition from one action to another, the dynamic development of the event form makes children’s ability to make quick decisions. This, of course, is one of the ways of national education, which appeared from the interest of the child in the play on words. Under the name “*Tu’lkishek*”, there are also fairy tales, children’s comic sayings, various outdoor games. Moreover, there is information about the transformation of such creations into the favorite creations of Karakalpak children over the course of several centuries. Also, even some of their samples have found a place in Uzbek and Kazakh folklore. Negotiations with the smallest of insects - ants, constitute a separate cycle. There are a lot of fables about ants in the Karakalpak folklore.

In some fables and nursery rhymes, there is close connection with interesting events and such positive qualities of an ant as tolerance to hunger, reconciliation with difficulties, flexibility, and others are described. Under the influence of such fables, nursery rhymes appear, they inspire imagination of children, further they will increase their curiosity to learn the secrets of nature, for example:

- *Qumursqa, qumursqa, (Ant, ant)*
- *Basiñ nege qasqa? (Why is your head with a spot?)*
- *Aqılım kóp shıǵar?! (May be I am very smart?)*
- *Quyriǵıñ nege juwan? (Why is your tail thick?)*
- *Kúshim kóp shıǵar?! (May be I am very strong?)*
- *Beliñ nege jiñishke? (Why is your waist so thin?)*
- *Shúkirligim kóp shıǵar?! (Maybe I am grateful for everything I have?!)*
- *Ayaǵıñ nege sıydam? (Why are your legs thin?)*



- *Júrisim kóp shıǵar?! (Maybe I walk a lot?!)*
- *Júrisiń nege jıldam? (Why do you walk fast?)*
- *Jumısim kóp shıǵar?! (Maybe I have a lot to do?!)*

Thus, through these questions and answers, a person is set as an example of the restlessness, hard work, and tolerance of an ant. Also, it is known that the nursery rhyme “*Who is stronger?*” ends with the ant eventually defeating everyone. The reason for this is that in myths and legends, an ant is considered the personification of hard work, patience. For example, during one of the heavy, bloody battles, the seriously wounded Amir Temur, who was lying very weak, with exhausted patience, lost hope, and sees one ant who carried a grain on him and could not climb a small hillock fifty times, but he still did not give up and fifty-first time, finally, climbed on it lastly. Amir Temur made a conclusion from what he saw, and made it a rule to never give up after the first failure.

## CONCLUSION

Thus, in general, nursery rhymes in the creativity of the peoples of Central Asia have been a folklore form that has existed for a long time. Samples inherent in the genre are “*Ha'kke qayda?*”, “*Tu'lkishek*”, “*Quslar qayda barasiz?*”, “*Tu'ye tu'ye, tu'yeler ...*”, with the creation of interesting question-and-answer dialogues of this type, they have been updated and revived with renewed vigor. Therefore, the children sang any line that they themselves knew to the existing pattern. For this reason, they had a variety of options, turned into creations that the kids themselves could sing and took a strong place in children's folklore.

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# THE DESIRED PROFESSIONAL COMPETENCIES IN THE HOSPITALITY INDUSTRY IN NUEVA VIZCAYA

**Evangeline H. Castro, PhD**

*Assistant Professor III, Nueva Vizcaya State University, Bambang, Nueva Vizcaya, Philippines 3702*

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## ABSTRACT

*The hospitality industry covers an extensive range of occupations, including those related to food service and lodging which require continuous innovations and improvement. This study determined the level of desired professional competencies in the hospitality industry in Nueva Vizcaya. Descriptive correlational method was employed to discover the relationships that exist between variables and to elicit data from hospitality professionals and educators from business establishments accredited by the Department of Tourism and higher education institutions in Nueva Vizcaya who participated in this study. A modified questionnaire, frequency counts and percentage, mean and correlational procedure were used to analyze and interpret data. Findings of the study showed that the desired professional competencies of respondents along personal effectiveness competencies, workplace competencies, and specific industry-sector competencies particularly on Lodging Management and Food and Beverage Management were very high. Likewise, respondent's intellectual competencies, industry wide competencies, and specific industry sector competencies particularly along Beverage Service; Culinary Arts; Front Office Procedure; Destination Marketing and Management; Tour Operations and Travel Management; Recreation, Amusement and Attractions; and Meetings, Events, and Exhibitions Management were high. It was found also that age and civil status significantly correlates with specific industry sector competencies particularly Beverage Service. However, the most crucial scenario to address is how to increase the understanding of certain managerial competencies and leadership styles to converge industry needs more accurately, to be more effective and successful managers or entrepreneurs. In this context, the researcher opted to propose for the enhancement of the curriculum of the Bachelor of Science in Hotel and Restaurant Management program to hospitality educators in Nueva Vizcaya.*

**KEYWORDS:** *Competencies, Professional Competencies, Hospitality Industry*

## INTRODUCTION

If there is one industry that have touched our lives by some means or other, it is no other than the hospitality industry, no matter where we are and what industry we belong. Although the hospitality industry is constantly changing in all aspects due to the changing demands, and needs of consumers including external forces like economy, politics, culture, and the like, the industry continues to influence and affect peoples' lives from all corners of the world. Conforming to the disclosure of World Travel and Tourism Council (WTTC) (2014) on contribution to employment, travel and tourism generated 105,408,000 jobs directly in 2014 (3.6% of total employment) and this is forecast to grow by 2.0% in 2015. Thus, this also includes job by hotels, travels representatives, airlines and other means of transportation services, restaurant or food and beverage services as well as convenience and recreation industries sustain by tourists. Aside from this, the tourism and hospitality employers anticipate the graduates to possess transferable standard competencies particularly in the areas of leadership, communication, strategic thinking and decision-making related to customer relations, computer skills, marketing media, security and safety.

Essential competencies in the hospitality industry have been recognized globally as well as

recommended to provide organizational focus as building blocks for human resource systems and as a method for certifying attainment of job skills. The level of skills, abilities, values and knowledge have by workers will basically determine their professional competence. Thus, hospitality education produces graduates who are equipped with necessary competencies to guarantee excellent and quality of services (Valachis, 2003).

In a similar manner, the study by Tesone, et al. (2010) found out that both managers and workers reported the same rankings of responses concerning the perceived importance of attributes that constitute both knowledge, and skills and competencies for entry-level lodging and food service workers. Side by side, Shariff, et al. (2014) affirmed that the industry perceives the ability to work in teamwork as a vital competency even when it stands as a second competency the industry expected the graduates to possess. Wilks, et al. (2011) in their collaborative research likewise concluded that priority should be given to soft competencies, that educating students to manage hospitality units represents a formidable challenge. Moreover, students need to acquire knowledge of economics, management, and other sciences in addition to vocational subjects aside from the need of competencies to perform well. Furthermore, the study concluded that hospitality



management is increasingly becoming an academic subject on its own right.

In the Philippine setting, a discrepancy in terms of competence in the job-worker matching was revealed by Peren (2012) in her published thesis on Reengineering of Bachelor of Science in Hotel and Restaurant Management Curriculum to harmonize with K-12 program as basis for curriculum development at HRM. Furthermore, graduates were noted to be undercompetent because their competence levels were below those required in their jobs. Significant gaps intervening competence and the required competencies entailed to perform their jobs at the hotel were recognized specifically, on the following employability characteristics and skills: initiative, team work, adaptability/flexibility, customer relations, dependability, written communication, responsibility, verbal communication, accounting and financial management, computer usage, and sales and promotion.

Zabala, et al. (2014) in their study on Students' Evaluation of the BSHRM Program: A Basis for Future Curriculum Revision at Mindanao State University revealed that the BSHRM program as evaluated by the students has to be revised in terms of the time allotted to each course if it is sufficient, excessive or inadequate. Also, tools, equipment, and textbooks that are relevant in the field should be provided for the program instruction in order for the students to enhance properly their knowledge and develop their abilities, talents, and skills subject to the actual work. To such a degree, balancing the different competencies between theory and practice is required from the hospitality management education and the hospitality industry.

Currently, the Hospitality and Tourism program in the province of Nueva Vizcaya is being offered by public and private colleges and universities including various technical or vocational schools offering the program in the diploma level. The Hospitality and Tourism Program must level up in order to successfully respond to the increasing challenges of the province, which has a lot of historical and natural attractions, religious and man-made tourists' attractions, festivals and special interest tours. Nueva Vizcaya stands strong and is proudly transforming into a fast-developing province with its fifteen municipalities. Each of these sites has its own promising land features, unique products, tourism attractions and services.

## OBJECTIVES

The aim of this study is to determine the required desired professional competencies perceived as priority in the hospitality industry within the province of Nueva Vizcaya as bases for enhancing the BSHRM curriculum to the different hospitality educators that will ensure graduates to possess the desired skills set for the job market and also to enable the graduates to manage the rapidly changing demands in today's hospitality industry, addressing increased competition, changing consumer attitudes, trends and employer demands.

## METHODOLOGY

The descriptive correlation method was utilized in the study to relate the desired professional competencies as perceived by industry professionals or practitioners and educators on the present and existing conditions of hospitality industries in Nueva Vizcaya. The participants were the hospitality professionals and educators from the fifteen municipalities of the province of Nueva Vizcaya particularly in areas where there are Hospitality and Tourism Industries accredited by the Department of Tourism-Region 02 were included. The study made use of a modified questionnaire from the Employment and Training Administration (ETA). The instrument includes two major competencies: the foundational competencies and the industry-specific competencies. Foremost of the instrument is the profile of respondents and the second part is the level of desired professional competencies along personal effectiveness, intellectual, workplace, industry-wide, and specific industry sector competencies. Data were processed using the frequency counts and percentage, weighted mean and correlational procedure.

## RESULTS AND DISCUSSION

Of the 103 hospitality professionals and educators, forty-six percent are within the age bracket of 20-29, sixty-four percent were dominated by female entrepreneurs and practitioners. Liaman (2014) contends that most hotel managers are around 30-39 years old, thus it is a common-sense wisdom that respondents want to work for more years with the same employer. On the contrary, findings conducted by Nanayakkara (2015) in Sri Lanka on human resources particularly women's employment in hotel industry remains very low-less than 8 percent for the leading hotel chains in the country.

Most of the respondents were married (58%) before employment which implies that most have chosen to have a family of their own but a good number remain single. Thus, most of the respondents finished a college degree (43%) which also conforms in the findings of Liaman (2014) that that managers running hotels and hostels are bachelor's degree holders and tourism and hospitality managers had bachelor's or master's degree degrees.

Most graduates of hospitality management courses practice their profession in the field as shown in the result of industry-based (79%) in terms of position classification. Furthermore, both in the Lodging and Food Services (47%), belong to the rank and file positions (57%), regular or permanent (89%), and new in the workplace (58%). This finding confirms what Celis et al. (2014) discovered in their study that majority of HRM graduates are productively employed and secured a job from one to two years after graduation; that most of the respondents are on contractual arrangement and are working in the Philippines; and majority are professionals working as personnel in HRM establishments. Similar findings, Liaman (2014) asserts that employees with a degree in tourism and hospitality and with the necessary experience are more competent and qualified workers rather than their colleagues with non-hospitality educational background.



The determination of the level of desired professional competencies, the highest perceived competencies were: Personal Effectiveness Competencies (4.30) and Workplace Competencies (4.23) followed by Industry-Wide Competencies (4.17) and Intellectual Competencies (4.03). This means that the desired professional competencies are indeed priorities by academic institutions in the formation of students and for a successful hospitality industry. The finding confirmed what Wilks and Hemsworth (2011) revealed in their study that hospitality employers tend to see personal qualities and interpersonal competencies as very relevant and most important in the field. In the same way, Jaykumar et al. (2014), found out that hotel managers indicated personality as the most important factor an employee in the hotel industry must possess. Research findings also in agreement with Koenigsfeld's (2011) finding when he revealed that leadership and interpersonal competencies are the most important and most frequently used managerial competencies.

This coincides with the finding of Millar et al. (2008) that educators and professionals are in agreement in terms of competencies in the conceptual domain where critical thinking, analytical, and decision making skills are related with problem solving skills.

Moreover, result in workplace competencies was related to what Nurhazani Mohd Shariff's (2014) finding that tourism and hospitality graduate students must consider major competencies in their preparation before entering the industry such as ability to work in team, ability to inform, learning skills, customer service skill, and ability to support staff, which are considered as important by industry professionals. This finding is supported by Grau et al. (2006) who suggested that all sets of competencies are required for effective management. Further, Silicka (2015) pointed out that the concluded components of the professional competence include professional knowledge obtained during the study process, working attitude, skills and abilities developed during the process of practical activities and social maturity in professional activities such as immersion or internship activities.

In the Specific Industry Sector, the highest proficiencies were the Lodging Management and the Food and Beverage Management (4.22). Meaning that the respondents consider the skills in managing accommodation and skills in managing food and beverage service to be very vital in the industry. Similarly, Resenberg (2004), as cited by Peren (2015) states that in a world progressively based on information technology capacities, coupled with communication competencies for some researchers (Cho 2002), acclaim the most important competencies to be acquired by hospitality students.

Moreover, competencies along Front Office Procedure (4.10); Culinary Arts (4.08); Meetings, Events and Exhibitions Management (4.06); Tour Operations and Travel Management (4.05); Destination Marketing and Management (4.03); Recreation, Amusement and Attractions (3.99); Beverage Service (3.92) were rated high. The result also suggests that all the identified competencies are indeed necessary for practitioners to acquire and develop, while in the industry and more so, for academic institutions, to cultivate such competencies among their students. This

confirms the finding of Rutelione (2009) that hotel employees must have well rounded competencies and must be multi – skilled. On the other hand, findings in the studies of Rusette (2000), Johanson (2008), Baum (2006), Wilkins (2006), and Peren (2015), showed that the required competencies identified recognizing customer problems, showing enthusiasm, maintaining professional and ethical standards, cultivating a climate of trust, adapting creatively to change, coping with emotional demands, empathizing with customers, and developing self-management skills.

The results also revealed the correlation between the desired level of professional competencies and the profile of the respondents was significant in the components of Specific Industry Sector Competencies the Beverage Service with the age (0.2132) and civil status (0.2063). It implies that the younger and single respondents in the beverage service were more likely to have higher level of desired professional competencies than the older and married respondents. This finding confirms what Alice Mueni Nzioka (2013) revealed and contended in her study that age and person's marital status influences the way he or she perceives issues. In her study, she found out that perception of the hotel general managers on job related factors varied considerably depending on their age. However, the present finding contradicts what Hagan (2015) revealed in her study that no significant relationship was established between the overall perception of service quality and the age of hotel guests.

On the type of industry sector with the desired level of professional competencies showed a very significant relationship particularly on specific industry sector competencies along Food and Beverage Management (0.2935), Beverage Services (0.2745), Culinary Arts (0.2744). Moreover, it has significant relationship with Personal Effectiveness Competencies (0.2159), Intellectual Competencies (0.2379), Workplace Competencies (0.2059). Furthermore, the same variable is significantly correlated with the specific industry sector competencies along Front Office Procedure (0.2096), Destination Marketing and Management (0.2309), Tour Operations and Travel Management (0.2391). All these could mean further that their level of desired competencies may be dependent on their area of operation whether in the lodging, food and beverage or both. However, those who operate both may have higher expectations than those who are focused on one. This is expected since each industry sector requires skills and competencies specific to that industry sector. This confirms the finding of Kamau and Waudu (2012) that there is a significant relationship between the skills expected by the hospitality industry employers' and the hotels' classification.

Employment status of respondents affects very significant relationship the perceived level of desired professional competencies with specific industry sector competencies along Destination Marketing and Management with a correlation coefficient of 0.3110 and *p*-value of 0.0014; Tour Operations and Travel Management with a correlation coefficient of 0.2562 and a *p*-value of 0.0089; Recreation, Amusement and Attractions with a correlation coefficient of 0.1902 and a *p*-value of 0.0013. Likewise, it has significant relationship with Intellectual Competencies with a



correlation coefficient of 0.2215 and a  $p$ -value of 0.0245. It implies that respondents who are regular or permanent are more likely to have higher expectations of the desired professional competencies than those who are on contractual basis.

## CONCLUSIONS

The respondents are in their early adulthood; generally female, married, bachelor's degree holders, industry-based and working in both Lodging and Food Services, holding rank and file positions, regular or permanent, and new in the workplace.

The respondents manifest a very high level of desired professional competencies along Personal Effectiveness Competencies, Workplace Competencies, and Specific Industry Sector Competencies particularly on Lodging Management and Food and Beverage Management.

The respondents also have a high level of desired professional competencies along Intellectual Competencies, Industry Wide Competencies, and Specific Industry Sector Competencies particularly along Beverage Service; Culinary Arts; Front Office Procedure; Destination Marketing and Management; Tour Operations and Travel Management; Recreation, Amusement and Attractions; and Meetings, Events, and Exhibitions Management.

The hospitality professionals and educators' desired professional competencies along age and civil status is significantly correlated with specific industry sector competencies particularly Beverage Service. The type of industry sector is very significantly correlated with specific industry sector competencies particularly Food and Beverage Management, Beverage Service, and Culinary Arts. Same variable is also significantly correlated with Personal Effectiveness Competencies, Intellectual Competencies, Workplace Competencies, and specific industry sector competencies particularly on Front Office Procedure, Destination Marketing and Management, and Tour Operations and Travel Management.

The respondents' level of desired professional competencies along employment status is very significantly correlated with specific industry sector competencies particularly along Destination Marketing and Management; Tour Operations and Travel

Management; Recreation, Amusement and Attractions. It is also significantly correlated with Intellectual Competencies.

Finally, the following desired professional competencies of hospitality professionals and hospitality educators in Nueva Vizcaya: Personal Effectiveness Competencies, Workplace Competencies, Intellectual Competencies and Specific Industry-Sector Competencies particularly on Lodging Management and on Food and Beverage Management, Beverage Service; Culinary Arts; Front Office Procedure; Destination Marketing and Management; Tour Operations and Travel Management; Recreation, Amusement and Attractions; and Meetings, Events, and Exhibitions Management.

## RECOMMENDATIONS

The industry based practitioners and even those in the academe may consider pursuing advanced education to enhance their Intellectual Competencies. They are also encouraged to acquire National Certification qualifications to keep abreast with the latest trends and current best practices.

More opportunities may be provided by administrators for hospitality management educators to attend industry trainings, regular seminars, immersion programs and scholarship grants. This will enable them to communicate openly about research projects and networking. They could also incorporate required competencies into job descriptions to strengthen the over-all learning experience of the students. Some of these desired professional competencies comprise problem solving skills, communication skills, critical thinking skills, team work, and interpersonal skills.

It is highly suggested that balance be made between applied and theoretical approaches, technical competencies and academic curriculum in addition to developing a complex of competencies relevant for service work.

Similar studies be conducted to find out the industry professionals and educators expectations to hospitality graduates comparing various job pairing skills and differences among competencies required in their jobs can be made.

## TABLES

Table 1

*Respondents' Level of Desired Professional Competencies*

| Components                                                            | Weighted Mean | Level     |
|-----------------------------------------------------------------------|---------------|-----------|
| Personal Effectiveness Competencies                                   | 4.30          | Very High |
| Intellectual Competencies                                             | 4.03          | High      |
| Workplace Competencies                                                | 4.23          | Very High |
| Industry Wide Competencies                                            | 4.17          | High      |
| Specific Industry Sector Competencies (SISC) along Lodging Management | 4.22          | Very High |
| SISC along Food and Beverage Management                               | 4.22          | Very High |
| SISC along Beverage Service                                           | 3.92          | High      |
| SISC along Culinary Arts                                              | 4.08          | High      |
| SISC along Front Office Procedure                                     | 4.10          | High      |
| SISC along Destination Marketing and Management                       | 4.03          | High      |
| SISC along Tour Operations and Travel Management                      | 4.05          | High      |
| SISC along Recreation, Amusement and Attractions                      | 3.99          | High      |
| SISC along Meetings, Events and Exhibitions Management                | 4.06          | High      |
| Overall Mean                                                          | 4.11          | High      |

**Table 2**

*Summary of Correlations between the Respondents' Profile in Terms of Age and their Desired Level of Professional Competencies*

| Professional Competencies                              | Correlation Coefficient | p-Value | Remarks         |
|--------------------------------------------------------|-------------------------|---------|-----------------|
| Personal Effectiveness Competencies                    | 0.0113                  | 0.9100  | Not Significant |
| Intellectual Competencies                              | 0.0217                  | 0.8279  | Not Significant |
| Workplace Competencies                                 | 0.0069                  | 0.9450  | Not Significant |
| Industry Wide Competencies                             | 0.0828                  | 0.4059  | Not Significant |
| SISC along Lodging Management                          | 0.0965                  | 0.3321  | Not Significant |
| SISC along Food and Beverage Management                | 0.0136                  | 0.8918  | Not Significant |
| SISC along Beverage Service                            | 0.2132                  | 0.0306  | Significant     |
| SISC along Culinary Arts                               | 0.0963                  | 0.3330  | Not Significant |
| SISC along Front Office Procedure                      | 0.1334                  | 0.1792  | Not Significant |
| SISC along Destination Marketing and Management        | 0.0781                  | 0.4327  | Not Significant |
| SISC along Tour Operations and Travel Management       | 0.0107                  | 0.9144  | Not Significant |
| SISC along Recreation, Amusement and Attractions       | 0.1020                  | 0.3051  | Not Significant |
| SISC along Meetings, Events and Exhibitions Management | 0.0409                  | 0.6815  | Not Significant |

**Table 3**

*Summary of Correlations Between the Respondents' Profile in Terms of Type of Industry Sector and their Level of Desired Professional Competencies*

| Professional Competencies                              | Correlation Coefficient | p-Value | Remarks          |
|--------------------------------------------------------|-------------------------|---------|------------------|
| Personal Effectiveness Competencies                    | 0.2159                  | 0.0284  | Significant      |
| Intellectual Competencies                              | 0.2379                  | 0.0155  | Significant      |
| Workplace Competencies                                 | 0.2059                  | 0.0369  | Significant      |
| Industry Wide Competencies                             | 0.1829                  | 0.0643  | Not Significant  |
| SISC along Lodging Management                          | 0.1733                  | 0.0800  | Not Significant  |
| SISC along Food and Beverage Management                | 0.2935                  | 0.0026  | Very Significant |
| SISC along Beverage Service                            | 0.2745                  | 0.0050  | Very Significant |
| SISC along Culinary Arts                               | 0.2744                  | 0.0050  | Very Significant |
| SISC along Front Office Procedure                      | 0.2096                  | 0.0336  | Significant      |
| SISC along Destination Marketing and Management        | 0.2309                  | 0.0189  | Significant      |
| SISC along Tour Operations and Travel Management       | 0.2391                  | 0.0149  | Significant      |
| SISC along Recreation, Amusement and Attractions       | 0.1301                  | 0.1901  | Not Significant  |
| SISC along Meetings, Events and Exhibitions Management | 0.1721                  | 0.0822  | Not Significant  |

**Table 4**

*Summary of Correlations Between the Respondents' Profile in Terms of Employment Status and their Level of Desired Professional Competencies*

| Professional Competencies                              | Correlation Coefficient | p-Value | Remarks          |
|--------------------------------------------------------|-------------------------|---------|------------------|
| Personal Effectiveness Competencies                    | 0.0650                  | 0.5139  | Not Significant  |
| Intellectual Competencies                              | 0.2215                  | 0.0245  | Significant      |
| Workplace Competencies                                 | 0.1113                  | 0.2629  | Not Significant  |
| Industry Wide Competencies                             | 0.1131                  | 0.2555  | Not Significant  |
| SISC along Lodging Management                          | 0.0989                  | 0.3202  | Not Significant  |
| SISC along Food and Beverage Management                | 0.1368                  | 0.1683  | Not Significant  |
| SISC along Beverage Service                            | 0.1019                  | 0.3054  | Not Significant  |
| SISC along Front Office Procedure                      | 0.1510                  | 0.1278  | Not Significant  |
| SISC along Destination Marketing and Management        | 0.3110                  | 0.0014  | Very Significant |
| SISC along Tour Operations and Travel Management       | 0.2562                  | 0.0089  | Very Significant |
| SISC along Recreation, Amusement and Attractions       | 0.3125                  | 0.0013  | Very Significant |
| SISC along Meetings, Events and Exhibitions Management | 0.1902                  | 0.0543  | Not Significant  |

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# SUPPLEMENTATION OF FISH OIL AS A SOURCE OF N-3 POLYUNSATURATED FATTY ACIDS IN HUMAN REDUCTION OF PSORIASIS DISEASE – A SYSTEMATIC REVIEW

Anurag Kumar Singh<sup>1</sup>, Vaishali A Meshram<sup>2</sup>

## ABSTRACT

*Psoriasis is an immune mediated chronic inflammatory human disease of unknown etiology and characterized by epidermal hyperplasia and inappropriate immune activation, which affects the skin and joints as well. Increased concentrations of free arachidonic acid (AA) and its pro-inflammatory metabolites have been observed in psoriatic lesions. Replacement of arachidonic acid by alternative precursor polyunsaturated fatty acids (PUFA), might be a therapeutic option in psoriasis. Fish oil contains n-3 polyunsaturated fatty acids, mainly eicosapentaenoic (EPA), and docosahexaenoic acids (DHA), reduces symptoms in many inflammatory skin diseases. The mechanism of action of fish oil in the treatment of psoriasis is widely based on the alteration of epidermal and blood cell membrane lipid composition. In conclusion, n-3-fatty acid administration causes reduction of psoriasis, which may be related to changes in inflammatory eicosanoid generation. oral administration of fish oil n-3 polyunsaturated fatty acids had positive effects. However, further studies are warranted to answer many intriguing questions, for instance, the ideal quantity of fish oil to be utilized, the effect on different forms and severity of psoriasis. we conducted a systematic review of all randomized controlled trials and observational studies that determined the effects of n-3 PUFAs on outcomes in patients with psoriasis compared with control treatment.*

## INTRODUCTION

Omega-3 fatty acids, which are found abundantly in fish oil, are increasingly being used in the management of many diseases. In this review we examine the extent to which Omega-3 nutritional interventions has been studied for the treatment of psoriasis. Psoriasis is a chronic, non communicable, inflammatory, hyper proliferative skin disease. It occurs equally in both sexes. There are more than 125 million people, or nearly three percent of the world's population, who endure the symptoms of psoriasis.

## OBJECTIVES

Many randomized controlled trials have been performed on the efficacy and mechanism of action of omega-3 polyunsaturated fatty acids (n-3 PUFAs) on psoriasis. This study wants to assess the effects of n-3 PUFAs on the severity of psoriasis.

## MATERIALS AND METHODS

Systematic review was conducted and reported  
Search strategy -

Databases were searched by two research investigators (AKS and VAM) independently. The search terms used were 'psoriasis', 'fish oils', 'omega 3', 'EPA', 'DHA', 'PUFA' and 'POLYUNSATURATED FATTY ACIDS'. Databases were searched for published studies indexed in the Cochrane Central Register of Controlled Trials (CENTRAL) of The Cochrane Library, PubMed/MEDLINE and EMBASE from database inception to November 2016. References of articles were also examined.

Inclusion and exclusion criteria -

All published randomized clinical trials were included in this study, comparing the effect of N3 PUFA with control in Psoriasis Patient. Titles and abstracts were read for preliminary screening; afterward, full texts were read to determine which studies were eligible for inclusion. Reviews and case reports were not included in this study.



#### Participants -

Participant of 18 years in age or older with any type of psoriasis (Plaque, guttate, pustular, inverse, erythrodermic or psoriatic arthritis) were included.

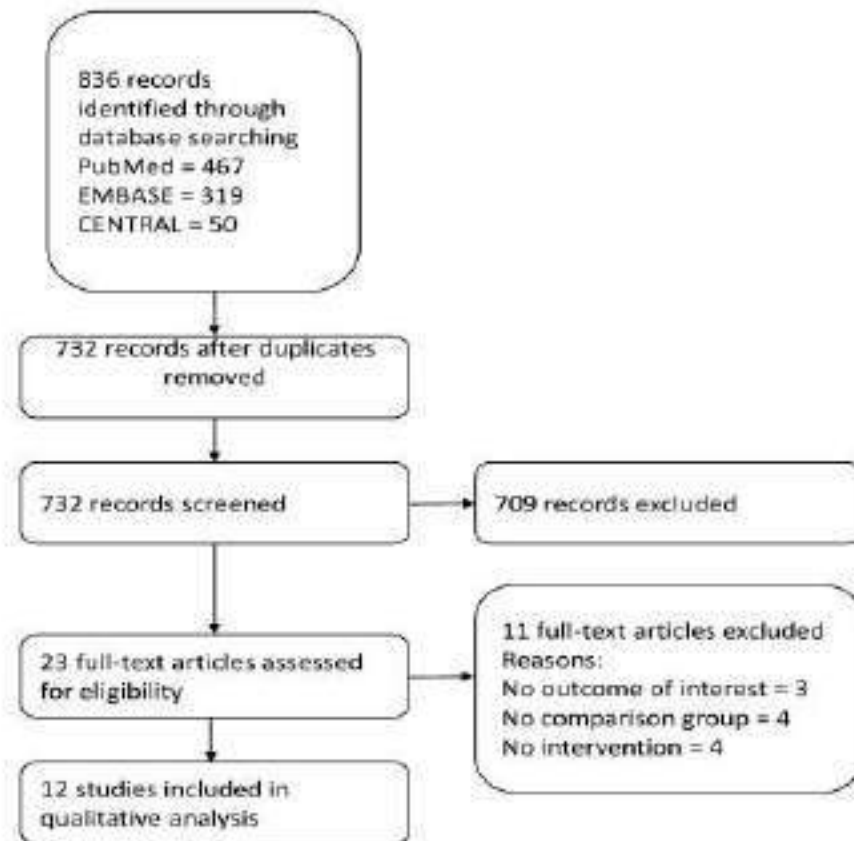
#### Data extraction and management -

Two study investigators (AKS and VAM) independently reviewed the titles and abstracts of all identified citations. The inclusion criteria were independently applied to all identified studies. Only full-text articles written in English were included.

#### RESULTS

Initial search identified 732 articles. A total of 720 articles were excluded because they were not randomized controlled trials. 12 randomized controlled trials were included, and the data of all 12 studies were extracted. Six studies reported improvement in the patients' erythema, scaling, itching, area involved and infiltration. The remaining study evaluated the effects of Fish oil combined with nonsteroidal anti-inflammatory drugs or disease-modifying antirheumatic drugs in patients with psoriatic arthritis. Patients in the group that received combination therapy showed reduction in PASI score and report a decrease in the number of tender joints.

**FIGURE 1 : Flow diagram of the literature search process.**



#### DISCUSSION

The most widely available dietary source of EPA and DHA is oily fish, such as salmon, herring, mackerel, anchovies, menhaden, and sardines. saturated n-3 fatty acids within human tissues is possible when provided with the precursor linolenic acid, the rate of synthesis to longer more unsaturated fatty acids in humans is limited. Eicosapentaenoic acid (EPA; 20:5 n-3) and docosahexaenoic acid (DHA; 22:6

n-3) are long-chain n-3 fatty acids found in all fish species, with oily fish from cold climates containing the highest levels of EPA and DHA. Eicosanoids from AA are responsible for inducing proinflammatory, proarrhythmic, and vasoconstrictive responses, whereas eicosanoids from EPA have the contrasting effects of anti-inflammatory, antiarrhythmia, and vasodilative responses.



Comparing fish oil with present treatment - Cyclosporin - Fish oil inhibits TXA<sub>2</sub> production and reduces both the hypertensive and nephrotoxic effects of cyclosporin.

Methotrexate - studies show that LC n3 PUFAs reduce loss of appetite, weight loss and gastrointestinal damage associated with methotrexate therapy.

Prescribers should consider the NSAID-sparing effects, The lack of serious side effects and the positive health benefits of fish oil. Its supplements offer the lowest cost of EPA and DHA than other supplementation.

There are still a number of limitations associated with their use in psoriatic patients. patients experiencing nausea, the consumption of therapeutic doses of fish oil (43 g per day) or more purified EPA/DHA (42 g EPA, 41.4 g DHA per day) may be impractical, because of the commonly experienced side effect of 'fishy' reflux experienced by many patients consuming fish oil or EPA/DHA supplements.

## CONCLUSIONS

A number of studies have evaluated the therapeutic benefit of n-3 fatty acids either using fish oil or highly purified n-3 fatty acid ethyl esters by the oral or topical route. Further research is still required to determine the mechanisms by which both marine derived n-3 PUFAs and other fish-oil derived compounds are mediating their effects.

## Acknowledgements

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# EFFECTIVENESS OF LIFE SKILLS ON INCREASING SELF-ESTEEM OF HIGH SCHOOL STUDENTS

Dr. Suman Dalal<sup>1</sup>, Ms. Parul<sup>2</sup>, Ms. Ritu<sup>3</sup>

<sup>1</sup>Associate Professor, Dean Faculty of Education, BPS Institute of Teacher Training & Research, BPSMV, Khanpur Kalan, Sonapat

<sup>2,3</sup>M.Ed Student

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## ABSTRACT

*The present study was conducted with the purpose to see a study of Effectiveness of life skills on increasing self-esteem of high school students. The present study was conducted to a randomly selected sample of 200 high school student of 6-8th class studying in Government and Private schools of Sonapat deistical in Haryana. Life Skills developed and standardised by M.N.Vranda (2009) & Self-Esteem developed by Dr .K. G. Agarwal (2015) tool was used for the collection of data in n the present study. The data were analyzed by employing mean, SD, 't'- test & 'r' value. The results of the study showed that female students of high schools are found life skills less adjusted than male students of high schools. Govt. school students are found life skills less adjusted than private school students. No significant difference is found in the self-esteem of high school students in relation to their gender and type of school.*

**KEYWORDS:** life skill, Self- esteem, Gender, Type of school, high school students.

## INTRODUCTION

Daily life refers to the set of skills that enable us to effectively handle issues commonly encountered in a life skill. Life Skills are psychosocial abilities that enable individuals to translate knowledge and values regarding their concerns into well informed and healthy behaviors. It should therefore be clear that everyone will potentially have a different list of the skills they consider most essential in life, and those that they consider unnecessary. Someone living in a remote rural community might put driving a car high on their list of essential skills. It is also true that different life skills will be more or less relevant at different times your life. For example: Communication skills ,interpersonal skills, Decision-making and problem-solving, Creative thinking , Self-awareness , Assertiveness, self-control, Resilience

## SELF-ESTEEM

Self-esteem is related to personal beliefs about skills, abilities, and social relationships. Self-

esteem can refer to the overall self or to specific aspects of the self, such as how people feel about their social standing, racial or ethnic group, physical features, athletic skills, job or school performance. It is the most popular measure of global self-esteem.

## REVIEW OF RELATED STUDIES

Mrs. Sonu Rani, Mr. Neeraj (2020) Conducted a study on "A Study on Life Skill of Senior Secondary Students". Sample of this study was 100 students felled thought random sample method of this study was used descriptive result showed female students of government high school was found less adjusted as compare to male. Government high School Student was found less adjusted as compare to private result indicate that no difference was found of female and male on the bases of life skills.



## JUSTIFICATION OF STUDY

Education plays an important role towards the overall development of human beings. School education helps in the formation of a sound personality in the child. Today, more and more societal pressures, greater complexity, uncertainty and diversity, rapid changes in the environment and continued deprivation put Early Childhood stage at the crossroads of their lives facing an uncertain future in facing the responsibilities of adulthood and to enter the world of work. During the 21st century, life, globally, is undergoing significant transition and change. Among the most affected are the adolescents. Life skills play an essential part of Early Childhood stage which are the future of our country. If students have better life skills and self-esteem they will adjust in a better way and their self-confidence will be higher.

## STATEMENT OF THE PROBLEM

*“Effectiveness of life skills on increasing self-esteem of high school students,,*

### Objective of the Study

1. To study the life skills of high school students.
2. To study the self-esteem of high school students.
3. To compare the Life Skills and Self-esteem female and male high Schools students.
4. To find the relationship between life skills and self-esteem of high school students.

### Hypothesis of the study

1. There exists no significant difference between the Life Skills and Self-esteem of the female and male students of high Schools.
2. There is no significant relationship between the Life Skills and self-esteem of high school students.

## RESULT AND DISCUSSION

**Objective-1: To compare the Life Skills and Self-Esteem of Female and Male High school students.**

Table-1

| Group  | N   | Mean  | SD    | 't' Value | Results                   |
|--------|-----|-------|-------|-----------|---------------------------|
| Female | 100 | 24.10 | 20.40 | 0.080     | Significant at 0.01 level |
| Male   | 100 | 31.12 | 22.44 |           |                           |

\*Significant at 0.05 level

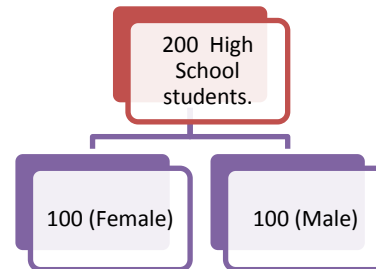
\*\*Significant at 0.01 level

### Research Methodology:

In present paper descriptive survey method was used.

### Sample of the study

Sample of the present study is 200 high school students selected on randomly bases including 100 male and 100 female students of 6-8<sup>th</sup> class.



### Variable of this study

Variable i.e. Life Skills, Self-esteem was taken for research work.

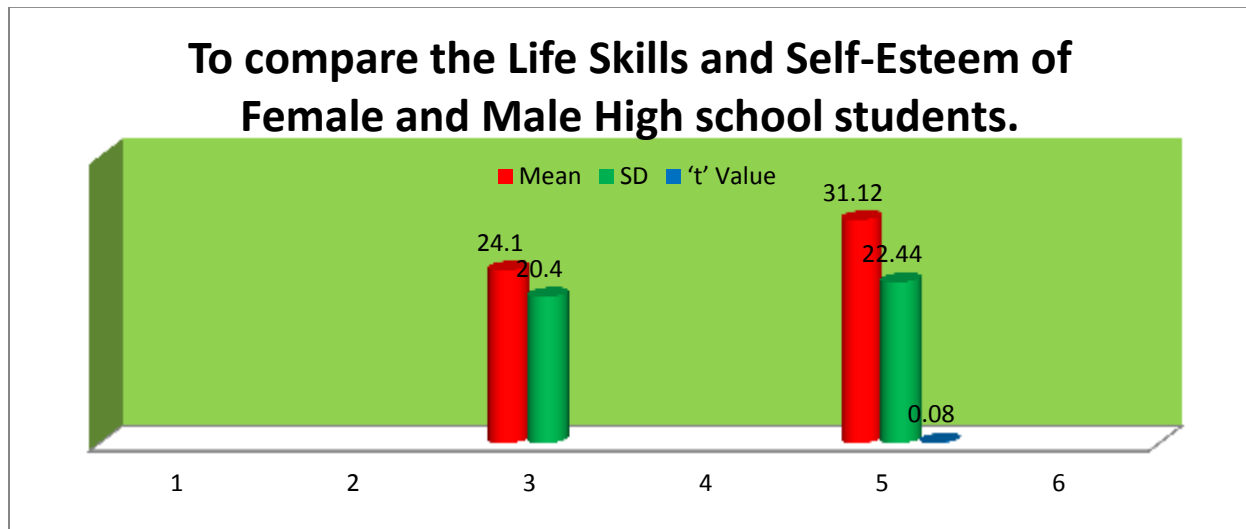
### Tool used: -

“Life Skills” was developed by *M.N.Vranda (2009)*

“Self-Esstem” was development by *Dr .K. G. Agarwal (2015)*

### Statistical Techniques Used:

Mean, T-test and ‘r’ was used for analysis the data.



Above table show that, the mean score of life skills of female high school students is 24.10. The mean score of male high school students is 31.12. The t- value comes out to be 0.080 which is significant at 0.01

levels. Thus, the null hypothesis there is no significant difference in the life skills of high school students in relation to their gender” is rejected.

## 2. There is no significant relationship between the Life Skills and self-esteem of high school students.

Table -2

| Group  | N   | S.D   | 'r' Value |
|--------|-----|-------|-----------|
| Male   | 100 | 21.54 | 0.072     |
| Female | 100 | 22.70 |           |

The above table shows that the SD of female and male are 22.70 and 21.54 respectively .The calculated value of correlation between life skills and self-esteem of high school students. So the null hypothesis is there is no significant relationship between life skills and self-esteem of high school students.

## CONCLUSION

Life skills are ability for adaptive and positive behavior that individuals to deal effectively with the demands and challenges of everyday life. The findings may useful for the students to understand the basic skills for life and its useful role in education as well as in day to day life. The skills are more helpful for the students to face difficult situation and make them to find a solution. The skills are having more educational value as they develop students' personality and make theme emotionally well fit in nature. Teachers and parents should understand the value of the skills and develop, organize and conduct life skill oriented programs and courses to make the students as

intelligent. Thus, the skills are helpful for the college students to promote mental health and competence.

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# PERSONALITY ADJUSTMENTS AS FACTORS AFFECTING ACADEMIC PERFORMANCE OF TERTIARY EDUCATION SUBSIDY (TES) GRANTEES

Helen C. Fuentes, Ph.D.

Assistant Professor, Eastern Samar State University, Eastern Samar, Philippines

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## ABSTRACT

*This is a correlation research describing the personality adjustments and academic performance of Tertiary Education Subsidy grantees. A total of 265 randomly TES grantees were the respondents for the study. Data were gathered through adapted questionnaires using online platforms. The null hypothesis was tested using the Spearman's Rank Correlation. The level of significance was set at .05 for rejecting or accepting the null hypothesis. Results of the study revealed the following: delaying gratification on food, physical pleasures, social interaction, money, and achievement were sometimes practiced by the grantees; giving importance to aspects of identity such as relational, social, and collective identities were frequently practiced while giving importance to personal identity was seen to be always practiced by the grantees; majority of the grantees exhibited satisfactory academic performance; the relationship between personality adjustments in terms of delayed gratification and academic performance was statistically not significant while identity orientation had significant relationship with the academic performance of the grantees.*

**KEYWORDS:** TES Grantees, personality adjustments, academic performance, subsidy

## INTRODUCTION

Education is one of the significant things man pursues. A good education affects several facets in life. Becoming a degree holder would mean better opportunities and a better life. The correlation between the family's socio-economic status and the student's school achievement or performance is widely established. The differences in the academic achievements of students belonging to varying socio-economic classes are more or less unchanging for students aged 7-11 years (Grades 2-6), but broadens at an increasing rate for those aged 11-15 years. As the children from low-income households, grow older, their school performance worsens, which tends to increase the likelihood of leaving school (Temple, 2009).

The Tertiary Education Subsidy (TES) is the initiative of the Philippine government to provide poor but capable students with access to higher education. It intends to raise the quantity of advanced education graduates among financially disable families through direct arrangement of financing for their schooling. The TES, as one of the government's sort of Conditional Cash Transfer (CCT) program has huge implications to of grantees. Character changes may emerge during the progress time frame from

non-TES to TES grantee. As per Maranda et al. (2016) recipients of CCT like the ESGP-PA grantees dread that they would not arrive at their fantasies, while monetary troubles and financial components, obstructed them from arriving at their objectives. Subsequently, it is critical to look at the character parts of the TES grantees to illuminate strategy making body. Receiving such amount may challenge a grantees' ability to resist the temptation of spending for immediate rewards to fulfil his personal identity orientations.

Delaying gratification is the capacity to oppose the enticement of a quick award in inclination for a later prize. It was seen that delaying gratification was a significant center segment of effective character change (Maranda et al, 2016). Personal Identity can be viewed as an individual that has not one "personal self" but instead a few selves that correspond to widening circles of group membership. The idea of Self Identity is clarified through three (3) central mental instruments that underlie it, which include: social arrangement, social correlation, and positive peculiarity. Progress alludes to an entry from a day to day existence stage, condition or status to another which includes both cycle and result of complex individual-environment interaction.



All together for TES beneficiaries to prevail in their examinations and complete their curricular programs, it is speculated that they ought to have an unmistakable perspective on the change that they go through as they are starting higher education degree, and it is vital that they acquire attention to the difficulties they face as they proceed with the TES program. Knowing their dreams and figuring their objectives would help them in the change from youthfulness to youthful adulthood. Also, they ought to have the option to postpone delight, to such an extent that it permits the beneficiaries to suspend satisfaction of quick needs and inclinations for a more noteworthy award which is a professional education. It is additionally estimated that beneficiaries who are in the juvenile time frame is currently fostering their characters and it is essential to decide if their self-personality understanding is related with their academic performance.

The findings of this study will contribute to the body of knowledge on personality adjustments on delay of gratification, and identity orientations and their influence to students' academic performance.

### Objectives of the Study

This study aimed to determine the factors that affect the academic performance of TES grantees in Eastern Visayas. Specifically, it aimed to attain the following objectives:

1. to describe the personality adjustments of TES grantees in terms of the following:
  - 1.1 delayed gratification, and
  - 1.2 identity orientation;
2. to assess the academic performance of TES grantees; and
3. to establish if there is significant relationship between personality adjustments and academic performance of TES grantees in Eastern Samar State University.

### METHODS

The current study used the quantitative correlational method with the questionnaire as the principal instrument to gather the necessary data. First, the data on TES grantees' delayed gratification, identity orientations, and the academic performance were described. After which, correlation of variables was performed to find out if there is significant relationship between personality adjustments (as categorized into delayed gratification and identity orientations) and academic performance of TES.

This study involved a total of 265 randomly selected TES grantees from Eastern Visayas, Philippines. Proportionate stratified random sampling technique was used and the total number of respondents was determined from the total number of population using the Krejcie and Morgan's Table for

Determining Sample Size of a Known Population (1970).

Two research instruments were used: (1) The Delay of Gratification Inventory (DGI), created and validated by Hoerger, was used to measure the respondents' personality adjustment in terms of delayed gratification. The DGI consists of 35 items which is composed of the five domains of delaying behavior, involving food, physical pleasures, social interactions, money, and achievement; and (2) Aspects of Identity Questionnaire-IV (AIQIV), this is a 45-item objective inventory that measures the importance of four aspects of identity orientations in individual's self-concepts: a) personal identity, or the importance of one's psychological traits and other personal attributes; b) relational identity, or how individuals see themselves in the contexts of their intimate relationships; c) social identity, or how the individuals see themselves in more general interpersonal contexts; and d) collective identity, or how individuals represent their various reference group identities (Cheek, 2013).

The responses on personality adjustments were tallied scored and analyzed using descriptive and inferential statistics. In the scoring process, negatively stated indicators were reversely coded. Mean, frequencies, and percentage were used to tabulate, analyze, and interpret the data obtained from the instruments. The personality adjustments as categorized into delayed gratification and identity orientations were determined by computing the weighted mean. The academic performance of TES grantees on the basis of their General Weighted Average (GWA) was summarized using frequency and percentage. The hypothesis that stated there is significant relationship between personality adjustment and academic performance of TES grantees in Eastern Visayas, was tested using the Spearman's Rank Correlation. The level of significance is set at .05 for rejecting or accepting the null hypothesis. The University Research Ethics Committee approved this study (Approval Reference Number 009-21-GS).

### RESULTS AND DISCUSSION

#### Personality Adjustments of TES Grantees

**Delayed Gratification.** Characteristics of the 265 TES grantees in terms of delayed gratification were presented in terms of the five (5) domains of delayed gratification namely: (1) food; (2) physical pleasures; (3) social; (4) money; and (5) achievement.

Food. The item "I have always tried to eat healthy because it pays off in the long run" got the highest mean rating of 4.12 which means frequently practiced while item "Sometimes I eat until I make myself sick" got the lowest mean rating of 2.14 which means rarely practiced. The overall mean of 3.18 means that TES grantees sometimes practiced



delaying gratification in terms of food. The result implies that like the children in the Marshmallow Experiment who were willing to delay gratification ended up higher SAT scores, in the present study the grantees that practiced delaying gratification on food may have better academic performance as indicated by higher general weighted average.

**Physical Pleasures.** Based on the respondents' responses pertaining to the measure of delayed gratification in terms of physical pleasures, the item "I am able to control my physical desires" got the highest mean rating of 4.07 which means frequently practiced while the item "I prefer to explore the physical side of romantic involvements right away" got the lowest mean rating of 2.00 which means rarely practiced. The overall mean is 3.12 which mean delayed gratification on physical pleasure is sometimes practiced by the respondents.

The result implies that the grantees had the ability to resist temptation on physical pleasures and stick to their goals or for something better.

**Social Interaction.** Among the indicators, item "I think that helping each other benefits society" got the highest mean rating of 4.47 which means always practiced, while item "I do not consider how my behavior affects other people" got the lowest mean rating of 1.88 which means rarely practiced. The overall mean is 3.34 indicated the grantees sometimes practice delaying gratification for social interaction.

**Money.** In terms of money, the item "When I am able to, I try to save away a little money in case an emergency should arise" got the highest mean rating of 4.29 which means always practiced. While items "When someone gives me money, I prefer to spend it right away" and "It is hard for me to resist buying things I cannot afford" got a mean rating ranging from 1.00 to 1.79 which means never practiced. The

overall mean of 2.86 which means sometimes practiced indicates that the grantees give value to money and tried to delay gratification in terms of money.

**Achievement.** The measure of delayed gratification in terms of achievement shows that items "I have tried to work hard in school so that I could have a better future" and "I worked hard in school to improve myself as a person" got the mean rating ranging from 4.20 to 5.00 which means always practiced, while items "I cannot motivate myself to accomplish long-term goals"; "I would rather take the easy road in life than get ahead" and "In school, I tried to take the easy way out" got a mean rating ranging from 1.80 to 2.59 which means rarely practiced. The overall mean of 3.29 is interpreted as sometimes practiced. This result indicates that the TES grantees are working hard in order to achieve their goals in life.

Table 1 presents the summary of the personality adjustment of the 265 TES grantees in terms of delayed gratification. As shown, all indicators got an overall mean rating ranging from 2.60 to 3.39 which mean sometimes practiced. The grand mean of 3.16 is interpreted as sometimes practiced as well. Further examination on the mean ratings revealed that TES grantees had the ability to adjust and resist short term gratification in favor of the long term one especially in terms of achievement. This result is similar to the findings of Maranda et al. (2016) when they measured the level of delayed gratification among ESGPPA Grantees who were also 4Ps members. This result implies that the grantees sometimes in many areas their life choose a long-term reward over immediate gratification. Hence, they perhaps believe that the ability to delay gratification can mean the difference between achieving their goals or not.

**Table 1. Summary on personality adjustments of TES grantees in terms of delayed gratification**

| Indicators         | Mean        | Interpretation             |
|--------------------|-------------|----------------------------|
| Food               | 3.18        | Sometimes Practiced        |
| Physical Pleasures | 3.12        | Sometimes Practiced        |
| Social Interaction | 3.34        | Sometimes Practiced        |
| Money              | 2.86        | Sometimes Practiced        |
| Achievement        | 3.29        | Sometimes Practiced        |
| <b>Grand Mean</b>  | <b>3.16</b> | <b>Sometimes Practiced</b> |

**Identity Orientation**

**Personal Identity.** Based on the respondents' responses pertaining to their identity orientation, items "I give importance to my personal goals and hopes for the future"; "I give importance to my personal values and moral standards"; "I give importance to my self-knowledge, my ideas about what kind of person I really am"; and "I give importance to my personal self-evaluation, the

private opinion I have of myself" got a mean rating ranging from 4.20 to 5.00 which means always practiced while other indicators for personal identity got a mean ranging from 3.40 to 4.19 which fall under frequently practiced. The overall mean of 4.20 was interpreted as always practiced. The result implies that the grantees always put high degree of importance to their personal aspect of identity.



**Relational Identity.** The measure of identity orientation in terms of relational identity shows that the item “I give importance to being a good friend to those I really care about” got the highest mean rating of 4.40 which means always practiced. On the other hand, the item “Connecting on an intimate level with another person” got a mean rating of 3.66 which means frequently practiced. The overall mean of 4.10 means frequently practiced giving importance to their relational aspect of identity.

**Social Identity.** The measure of identity orientation of the grantees in terms of social identity shows that the strongest indicator for social identity is in terms of giving importance to social behavior, such as the way they act when meeting people, which is indicated by the mean score rating of 4.15. The indicators “I give importance to my reputation, what others think of me”; “I give importance to the ways in which other people react to what I say and do”; “I give importance to my gestures and mannerisms, the impression I make on others”; “I give importance to my physical appearance: my height, my weight, and the shape of my body”; and “I give importance to my attractiveness to other people” were frequently practiced as indicated by the mean ratings of 4.05, 3.98, 3.89, 3.72, and 3.40 respectively. The item “I give importance to my popularity with other people”

is sometimes practiced by the grantees as indicated by the mean rating of 3.26. In relation to the aforesaid findings, it can be implied that the grantees give value to what other people say about them.

**Collective Identity.** The grantees frequently practiced giving importance to family background; feeling of pride in the country or being proud to be a citizen of the country; their religion; language, such as accent or dialect or a second language that they know; being a part of the many generations of their family; places where they lived or where they were raised; and their commitment on political issues or their political activities. Hence, the overall mean of 3.96 indicated that the grantees frequently practiced all the indicators for collective identity.

Table 2 presents the summary for personality adjustment in terms of identity orientation. As seen in this table, all aspects of identity were frequently practiced. Only personal identity was seen to be always practiced, which is indicated by the mean rating of 4.20. This result implies that the grantees frequently designated personal identity at first place for the description of in their own person compared to other aspects of identity. This further implies that they make decisions and choices based on personal reasons or benefits.

**Table 2. Summary table for personality adjustments in terms of identity orientation**

| Indicators          | Mean | Interpretation       |
|---------------------|------|----------------------|
| Personal Identity   | 4.20 | Always Practiced     |
| Physical Identity   | 4.10 | Frequently Practiced |
| Social Identity     | 3.78 | Frequently Practiced |
| Collective Identity | 3.96 | Frequently Practiced |
| Grand Mean          | 4.01 | Frequently Practiced |

**Academic Performance of TES Grantees**

Table 3 presents the academic performance of the grantees during the school year 2019-2020. It can be gleaned from Table 3 that 26 or 9.81% are TES grantees with “Outstanding” performance, 76 or

28.68% with “Very Satisfactory” performance, 151 or 56.98% with “Satisfactory” performance, and 12 or 4.53% have “Fairly Satisfactory” academic performance. Results show that most of the grantees are average learners.

**Table 3. Frequency distribution of TES grantees in terms of academic performance**

| Descriptor & Grading Scale            | f   | Percentage |
|---------------------------------------|-----|------------|
| Outstanding (1.5 above)               | 26  | 9.81       |
| Very Satisfactory (2.0-1.6)           | 76  | 28.68      |
| Satisfactory (2.5-2.1)                | 151 | 56.98      |
| Fairly Satisfactory (3.0-2.6)         | 12  | 4.53       |
| Did Not Meet Expectations (below 3.0) | 0   | 0          |
| Total                                 | 265 | 100        |

**Relationship between Personality Adjustments and Academic Performance of the TES Grantees**

This study investigated the relationship between personality adjustments of the grantees in terms of delayed gratification and identity orientation and

their academic performance. Table 4 shows that delayed gratification ( $r = 0.029$ ;  $p = 0.646$ ) of the TES grantees at 0.05 level of significance showed no significant relationship with their academic performance. Thus, the null hypothesis which stated



that there is no significant relationship between personality adjustments in terms of delayed gratification and academic performance cannot be rejected. This result is contrary to the findings of the analysis of Wulfert et al. (2012) that grade point average (GPA) and delay of gratification produced significant results. Bembenuddy (2011) reiterated that individuals who are able to delay gratification are known to have higher intelligence and higher academic achievement and more socially well adapted than individuals who succumb easily to immediate impulses and temptations. The result implies that delay of gratification may not directly affect the students' academic performance on the

basis of general weighted average but perhaps have impact on achieving their goals in life.

On the other hand, the identity orientation ( $r = 0.892$ ;  $p = 0.000$ ) at 0.05 level of significance had significant relationship with their academic performance. Hence, the null hypothesis which stated that there is no significant relationship between personality adjustments in terms of identity orientation and academic performance of TES grantees in Eastern Visayas is rejected. This result conforms to the conclusion drawn by Hejazi et al. (2012) that personal identity of high school students is related to academic achievement.

**Table 15. Relationship between personality adjustments and academic performance**

| Independent Variable  | Dependent Variable   | Index of Correlation | p-Value | Interpretation  |
|-----------------------|----------------------|----------------------|---------|-----------------|
| Delayed Gratification | Academic Performance | 0.029                | 0.646   | Not significant |
| Identity Orientation  |                      | 0.892                | 0.000   | Significant     |

This result implies that the grantees who give importance to their identity orientation are more likely to place value on their scholastic success.

Finally, the result of the study revealed that delayed gratification is not significantly related with the academic performance of TES grantees while identity orientation affects the academic performance of TES grantees in Eastern Visayas.

### RECOMMENDATIONS

The researcher recommends that personality development and values formation seminars have to be provided to boost the grantees' personality; financial management discussions have to be delivered to somehow guide the grantees in managing their finances; peer tutorial perhaps be conducted to improve the academic performance of the grantees; and to respond to the needs of the TES grantees, the SUC may conduct or intensify the Academic Enhancement Program (AEP) to develop critical experiences and skills necessary for personality development and academic success.

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# EXPLORING THE EFFICACY OF KNOWLEDGE-BASED PROGRAM ON THE PERFORMANCE OF NURSES IN TRIAGE IN EMERGENCY DEPARTMENT IN OMDURMAN MILITARY HOSPITAL

**Mazza Badawi Abu bakr**

*University of Gezira , Faculty of Medicine, Primary Health Care and Health Education Center. Sudan*

## ABSTRACT

**Context:** Nurses are the primary anchorpersons of triage in emergency departments. Triage nurse should have the proper education and proficiency in emergency triage, decision making, and emergency nursing care. Training on triage is an integral part of emergency nursing education. Poor performance and lack of education are well documented in the literature.

**Aim:** This study aimed at exploring the efficacy knowledge-based program on the performance of nurses in triage in emergency department in Omdurman Military Hospital.

**Methods:** Quasi-experimental (pre, post-test design) used to achieve the aim of this study. A purposive sample of one hundred fifty emergency nurses worked at pediatric, Obstetric, and adult emergency departments affiliated to Omdurman Military Hospital . Assessment of the nurses' knowledge, practice, and attitude have been done using a self-administered questionnaire, triage competencies observational checklist, and nurses' attitude measuring scale.

**Results:** The study revealed poor nurses' triage knowledge, practice, and negative attitude for the studied nurses before triage education, compared to a significant improvement after triage educational program, with a statistically significant difference among the three- implementation phases (pre, post, and one month follow up).

**Conclusion:** The nurses who are subjected to triage education improved in their knowledge, practice and attitude at the post-intervention evaluation compared to their pre-intervention level, which sustained after one month follow up. These findings support the study hypotheses. Based on these findings, the study recommended the publication and dissemination of the triage educational program. Besides, fostering and sustaining the improvements in practices regarding triage in ED through the orientation of new nurses, on the job training, and continuous education.

**KEYWORDS:** Efficacy , Triage, nurses' performance, emergency departments, Omdurman Military Hospital.

## INTRODUCTION

Triage is the method of deciding the need of patients' medications based on the seriousness of their condition. This apportions persistent treatment proficiently when assets are inadequately for all to be treated quickly. The term comes from the French verb trier, meaning to isolated, filter or select. Triage may result in deciding the arrangement and need of crisis treatment, the arrange and need of crisis transport, or the transport goal for the understanding (Iserson and Moskop, 2017).

The emergency department is the pivotal interface between the crisis restorative administrations and the clinic. As reflected within the year-on- year increments in persistent numbers, in any case, crisis

offices are progressively being chosen as the course of essential get to to the healthcare framework (Pitts et al.,2018) . Shortfalls in preclinical persistent direction have been put forward as a conceivable clarification for this drift (Steffen et al.,2017).

The size of admissions a given crisis office cannot be anticipated with any awesome exactness, as it were a certain extent of the patients have life-endangering or therapeutically pressing conditions (Schellein et al.,2018) , and not all those conceded can be treated promptly or at the same time. Hence, patients with life-threatening wounds or ailments have to be dependably distinguished inside minutes of entry (Rutschmann et al.,2019).

Organized triage systems for emergency



department admissions are already in use in the German-speaking countries and the relevant medical societies are calling for their introduction in nations with established hospital emergency services (Rutschmann et al., 2019, Fernandes et al., 2015).

Within the emergency department, triage alludes to the strategies utilized to evaluate patients' seriousness of damage or sickness inside a brief time after their entry, allot needs, and exchange each understanding to the suitable put for treatment (Fernandes et al., 2015). In our see the term —triage-ought to be embraced in German-speaking nations in inclination to the different German words that have been utilized, e.g., —Sichtung and Ersteinschätzung, as the last mentioned are not clearly characterized concepts. In a few European nations, among them Germany and Switzerland, triage is performed by extraordinarily prepared nursing staff. The point of this ponder is to supply a systematic diagram of set up disobedient for triage within the crisis division and assess their legitimacy and unwavering quality (Grossmann et al., 2019).

In Sudan system is structured with a primary triage area for sorting patients into emergent and non-emergent cases. The first group is then triaged into one of three sectors: resuscitation area, critical care area, and an area for less severe cases. All traumatic patients are triaged immediately to the trauma room. But the non-emergent cases are assessed in a separate area as cold cases. (Elbashir and Elfaki, 2017).

## METHODOLOGY

A hospital-based study, and a quasi-experimental (pre, post and follow up) design used in order to achieve the aim of the study. This design used to compare participant groups and measure the degree of change occurring as a result of treatments or interventions. The study conducted at Omdurman Military Hospital at different sorts of emergency departments mainly including pediatric, obstetric, and adult emergency departments. A purposive sample consisting of 150 nurses recruited to achieve the aim of this study. They are selected from pediatric, obstetric, and adult emergency departments in terms of fifty nurses from each department at Omdurman Military Hospital.

The nurses selected according to the following inclusion criteria:

- Nurse implemented triage before
- Nurses have not less than one year of experience in the emergency department.
- The nurse did not attend any courses about triage.
- Nurses are available at the time of data collection and willing to participate in the study.

Self-administered questionnaire was developed

by the researchers to assess the nurses' socio-demographic characteristics such as age, marital status, rotation shift, educational qualifications, and years of experience in the emergency department in its first part. The second part of the questionnaire was designed by the researchers to assess the nurses' knowledge about emergency triage in the three different cases (Adult, Pediatric, and Obstetric triaging). It assesses the main concepts in triage. It included ten open-end questions. They are meaning of triage (1 question), triage principles (1 question), triage scale (1 question), triage assessment and allocation of triage category (1 question), prioritizing patients based on their clinical presentation (1 question), triage 4 decision (1 question), risk factors of patient's condition (1 question), objective data collection (1 question), subjective data collection and communication (1 question), and specific nursing interventions for different cases (pediatric, obstetric or adult care) (1 question) (Vasseur, 2001; Gilboy et al., 2012; & John & Sons, 2014). This questionnaire distributed in the same form three times (pre, post-program implementation, and at one month's follow up) for the same group of nurses. The questionnaire Alpha Cronbach reliability test equal to 0.87.

Triage competencies observational checklist adopted from Australian College for Emergency Medicine (2009), Elsayed, Ahmed, & Abdelhamid, (2014), and Kevin, Marsden, & Windle, (2014) to evaluate nurses' practices concerning triage process. It encompasses 55 statements distributed on seven essential competencies as followed: Emergency assessment (9 steps) including inspection, specification of medical risks (primary assessment), main complain, medication taken before admission, medical history, five minutes triaging, correct patient positioning, maintain privacy, and psychological evaluation. Clinical decision making (3 steps) that include determination of patient urgent health care need, specification of medical care, initiating priority treatment.

Nurses' attitude measuring scale adopted from Suen, Wong, Chow, & Kong (2006) and Elsayed, Ahmed, & Abdelhamid, (2014) to assess the nurses' attitude toward triage activities. It was a three-point Likert type scale that consisted of 10 statements. It includes such statements as nurses' attitude toward triaging, patient care delay, patient reception, etc. The scale Alpha Cronbach reliability test equal to 0.87.

Data collected, scored, summed, organized, tabulated, and analyzed by a personal computer using the —Statistical Package for the Social Sciencel (SPSS windows), version 19. Numerical data expressed as mean  $\pm$  SD, and range. Qualitative data expressed as frequency and percentage. Chi-square ( $X^2$ ), and





relations between different numerical variables were tested using the Pearson correlation. A P. value less was considered significant, and less than 0.001, considered highly significant.

## RESULTS AND DISCUSSION

Table (1) shows the socio-demographic characteristics of the studied nurses. It indicates that the higher percentage of the nurses' age ranged between 25 < 30 years. 76%, 80%, and 84% of nurses working at pediatric ED, obstetric ED, and nurses working at adult ED respectively were married. Rotation shift, 60%, 64% and 60% of nurses working at pediatric, obstetric ED, and an adult ED respectively had worked all shift rotations. Regarding their level of education, 50% and

than (0.05)

54% of nurses working at obstetric ED and nurses working at adult ED respectively had secondary nursing education, while 52% of nurses working at pediatric ED had technical nursing education. As regards nurses' years of experience 54.0% and 46.0% of nurses working at obstetric ED and adult ED respectively have more than 5 years of experience, whereas 52% of nurses working at pediatric ED have < 5 years of experience with a non-significant difference between nurses working at the three emergency department regarding their socio-demographic characteristics.

**Table (1): Frequency and percent distribution of socio- demographic characteristics of the studied nurses at the various emergency department (n = 150).**

| Items                                       | Nurses working at the pediatric Emergency department (n=50) |      | Nurses working at obstetrics Emergency department (n=50) |      | Nurses working at the medical Emergency department (n=50) |      | X <sup>2</sup> | P value |
|---------------------------------------------|-------------------------------------------------------------|------|----------------------------------------------------------|------|-----------------------------------------------------------|------|----------------|---------|
|                                             | Frequency                                                   | %    | Frequency                                                | %    | Frequency                                                 | %    |                |         |
| <b>Age in years</b>                         |                                                             |      |                                                          |      |                                                           |      | 2.10           | 0.08    |
| < 20                                        | 10                                                          | 20.0 | 5                                                        | 10.0 | 4                                                         | 8.0  |                |         |
| 20 < 25                                     | 15                                                          | 30.0 | 12                                                       | 24.0 | 12                                                        | 28.0 |                |         |
| 25 < 30                                     | 20                                                          | 40.0 | 18                                                       | 36.0 | 22                                                        | 44.0 |                |         |
| ≥ 30                                        | 5                                                           | 10.0 | 12                                                       | 30.0 | 10                                                        | 20.0 |                |         |
| Mean ±SD                                    | 22.48±3.83                                                  |      | 23.68±4.33                                               |      | 23.26±3.97                                                |      |                |         |
| <b>Marital Status</b>                       |                                                             |      |                                                          |      |                                                           |      | 1.88           | 0.26    |
| Single                                      | 12                                                          | 24.0 | 10                                                       | 20.0 | 8                                                         | 16   |                |         |
| Married                                     | 38                                                          | 76.0 | 40                                                       | 80.0 | 42                                                        | 84   |                |         |
| <b>Rotation shift</b>                       |                                                             |      |                                                          |      |                                                           |      | 0.19           |         |
| Morning                                     | 5                                                           | 10.0 | 6                                                        | 12.0 | 7                                                         | 2.07 |                |         |
| Night                                       | 15                                                          | 30.0 | 12                                                       | 24.0 | 13                                                        | 26.0 |                |         |
| All                                         | 30                                                          | 60.0 | 32                                                       | 64.0 | 30                                                        | 60.0 |                |         |
| <b>Educational Qualifications</b>           |                                                             |      |                                                          |      |                                                           |      | 2.45           | 0.18    |
| Secondary Nursing Education                 | 20                                                          | 40.0 | 25                                                       | 50.0 | 27                                                        | 54.0 |                |         |
| Technical Nursing Education                 | 26                                                          | 52.0 | 20                                                       | 40.0 | 20                                                        | 40.0 |                |         |
| Bachelor Of Nursing                         | 4                                                           | 8.0  | 5                                                        | 10.0 | 3                                                         | 6.0  |                |         |
| <b>Years of experience in the emergency</b> |                                                             |      |                                                          |      |                                                           |      | 1.64           | 0.27    |
| < 1                                         | 6                                                           | 12.0 | 3                                                        | 6.0  | 5                                                         | 10.0 |                |         |
| 1 < 5                                       | 26                                                          | 52.0 | 20                                                       | 40.0 | 22                                                        | 44.0 |                |         |
| ≥ 5                                         | 18                                                          | 36.0 | 27                                                       | 54.0 | 23                                                        | 46.0 |                |         |
| Mean ±SD                                    | 5.46±4.21                                                   |      | 5.96±4.23                                                |      | 6.56±3.78                                                 |      |                |         |



Table (2) indicates that, the studied nurses' knowledge had improved through education guideline phases as 95% and 90% had unsatisfactory knowledge related to triage scale, triage assessment, triage decision, risk factors of patient's condition, objective data collection, subjective data collection and

communication, and nursing interventions during triage implementation before the program implementation, which improved to be most of them had satisfactory knowledge post-program implementation and at follow up respectively.

**Table (2): Percentage distribution of the studied nurses according to their knowledge about triage in diverse emergency departments (n = 150).**

| Knowledge related to the implementation of triage         | Pre-program    |                  | Post-program   |                  | Follow up      |                  |
|-----------------------------------------------------------|----------------|------------------|----------------|------------------|----------------|------------------|
|                                                           | Satisfactory % | Unsatisfactory % | Satisfactory % | Unsatisfactory % | Satisfactory % | Unsatisfactory % |
| Triage definition                                         | 40.0           | 60.0             | 95.0           | 5.0              | 92.0           | 8.0              |
| Triage Principles                                         | 37.0           | 63.0             | 96.0           | 4.0              | 95.0           | 5.0              |
| Triage Scale                                              | 5.0            | 95.0             | 88.0           | 12.0             | 85.0           | 15.0             |
| Triage assessment and allocate a triage category          | 5.0            | 95.0             | 88.0           | 12.0             | 85.0           | 15.0             |
| Prioritize patients on the basis of clinical presentation | 20.0           | 80.0             | 90.0           | 10.0             | 90.0           | 10.0             |
| Triage decision                                           | 6.0            | 94.0             | 87.0           | 13.0             | 85.0           | 15.0             |
| Risk factors of patient's condition                       | 5.0            | 95.0             | 88.0           | 12.0             | 85.0           | 15.0             |
| Objective data collection                                 | 15.0           | 85.0             | 95.0           | 5.0              | 95.0           | 5.0              |
| Subjective data Collection and communication              | 10.0           | 90.0             | 95.0           | 5.0              | 95.0           | 5.0              |
| nursing interventions                                     | 10.0           | 90.0             | 95.0           | 5.0              | 92.0           | 15.0             |

Table (3) demonstrates that, the studied nurses' practices improved throughout guideline implementation phases as most of them (90%) don't practice satisfactorily before triage education regarding to emergency assessment, clinical decision making and,

and environmental hazards, which improved to reach the majority of them (96.0% and 90%) practices satisfactorily all the triage competencies immediately post program implementation and at follow up.

**Table (3): Percentage distribution of studies nurses according to their practices of triage competencies in diverse emergency department (n=150).**

| Items                                  | Pre-program |          | Post-program |          | Follow up |          |
|----------------------------------------|-------------|----------|--------------|----------|-----------|----------|
|                                        | Done        | Not done | Done         | Not done | Done      | Not done |
|                                        | %           | %        | %            | %        | %         | %        |
| Emergency assessment                   | 10.0        | 90.0     | 88.0         | 12.0     | 85.0      | 15.0     |
| Clinical decision making               | 10.0        | 90.0     | 75.0         | 25.0     | 85.0      | 15.0     |
| Triage intervention                    | 35.0        | 65.0     | 96.0         | 4.0      | 96.0      | 4.0      |
| Leadership and management activities   | 15.0        | 85.0     | 90.0         | 10.0     | 85.0      | 15.0     |
| Safety of patients in the waiting area | 15.0        | 85.0     | 90.0         | 10.0     | 85.0      | 15.0     |
| Environmental Hazards                  | 10.0        | 90.0     | 88.0         | 12.0     | 85.0      | 15.0     |



Table (4) reveals that there is an improvement in nurses' total attitude immediately, after, and at follow up program implementation scores for the majority of them. As (90%) and 88% of studied nurses showed a positive attitude toward triage, compared to 20%

preprogram implementing, with statistically significant differences between the three phases ( $P < 0.001$ ). Table (4.4): Frequency and percentage distribution of nurses' attitude towards triage in diverse emergency departments ( $n=150$ ).

**Table (4.4): Frequency and percentage distribution of nurses' attitude towards triage in diverse emergency departments ( $n=150$ ).**

| Items               | Pre guideline |      | Post guideline                                                                         |      | Follow up         |      |
|---------------------|---------------|------|----------------------------------------------------------------------------------------|------|-------------------|------|
|                     | No            | %    | No                                                                                     | %    | No                | %    |
| Positive            | 10            | 20.0 | 45                                                                                     | 90.0 | 44                | 88.0 |
| Negative            | 40            | 80.0 | 5                                                                                      | 10.0 | 6                 | 12.0 |
| Mean attitude score | 0.612±0.44    |      | 2.46±1.06                                                                              |      | 2.22±0.86         |      |
| X <sup>2</sup>      |               |      |                                                                                        |      | P value < 0.001** |      |
|                     |               |      | X <sup>2</sup> (1) = 15.02<br>X <sup>2</sup> (2) = 18.20<br>X <sup>2</sup> (3) = 10.04 |      |                   |      |

< 0.001 \*highly statistically significant  
(2) Pre-intervention versus follow up

X<sup>2</sup> (1) Pre-intervention versus post intervention X<sup>2</sup>  
X<sup>2</sup> (3) Post-intervention versus follow up

## DISCUSSION OF RESULTS

Triage is an autonomous nursing role that is vital to patient security and the efficient delivery of emergency care. The triage nurse must establish the capacity for critical thinking in environments where available data is inadequate, incomplete, or vague (Elsayed, Ahmed, & Abdelhamid, (2014). Education has a crucial role in improving the performance of emergency department nurses. Therefore, this study aimed to evaluate the effect of triage education on nurses' performance in diverse emergency departments.

The current study revealed that the higher percentage of nurses' age ranged between 25 - ≤ 30 years with the mean age of the studied nurses in three groups, was found to be 22.48±3.83, 23.68±4.33 and 23.26±3.97years. Similar findings reported by Duko et al., (2019), who mentioned that 86.1% were under 30 years. Regarding their marital status, more than three-quarters of nurses working at pediatric ED, obstetric ED, and nurses working at adult ED respectively married. These results disagreed with Kerie et al (2018), who stated that nearly two thirds of the respondents were single in their study.

Also, more than half of Kerie's studied sample had not completed their high education and were secondary and technical nursing education Kerie et al., (2018). This finding is similar to the present study findings as about half of nurses in Obstetric ED, and Adult ED had secondary nursing education, plus more

than half of nurses in Pediatric ED had technical nursing education. This finding represents a particular Egyptian situation of increasing numbers of technical nurses compared to their colleagues who are faculty graduated. This finding could be explained by the vast numbers of secondary schools (either three or five years) and technical institutes compared to the number of nursing faculties all over the country. It was not the case with Duko et al., (2019) study when more than two-thirds of their study completed a bachelor's degree in nursing. As regards nurses' years of experience more than half and more than one-third of nurses working at obstetric ED and nurses working at adult ED respectively have 5 or more years of experience, whereas 52% of nurses working at pediatric ED have one to less than five years of experience in emergency departments. This finding agreed with Kerie et al., (2018) and Duke et al., (2019), who found that about 49.2% and 79.2% of the respondents had working experience of less than one year and < three years respectively in the emergency department. Only 19.6% of participants worked in the triage room with a minimum of 1 month and a maximum of 48 months.

Moreover, the current study showed that more than two-thirds of the studied nurses' knowledge about triage was unsatisfactory before the program implementation. This knowledge level was significantly improved in the current study for most of them after program implementation, and maintained at



the follow up evaluation, as regards triage definition, triage principles, triage scale, triage assessment and allocate a triage category, prioritizing patients based on clinical presentation, triage decision, risk factors of patient's condition, objective data collection, subjective data collection and communication, and appropriate nursing interventions. This finding may be due to that, the settings of the study do not follow any guideline or even allow attending programs regarding triage principles or application, which negatively affected their awareness and performance. Similarly, Mohey & Alazmi, (2017) illustrated in a study titled—Primary Healthcare Emergency Services in Alexandria that all the Primary Healthcare (PHC) facilities had no written clinical practice guidelines for providing primary emergency services, no plans for pediatric emergency triage, assessment or treatment, and no clear referral procedures. This finding also supported Ebrahimi et al., (2016) who found that, the performance of triage nurses in the identification of triage level before training on emergency severity index (ESI) was 42.3% accuracy before the intervention and improved to 93.9% after training in Khatam-al-Anbia hospital (Iranshahr). Hence, the first hypothesis supported. This finding also reinforced by a recent study done by Reisi et al., (2018), who detected a low-level knowledge, score among emergency nurses employed in triage.

The present study demonstrates that, the studied nurses' practices improved throughout the education guideline implementation phases as most of them don't practice triaging before the guideline implementation, particularly in respect to emergency assessment, clinical decision making, triage intervention, leadership, and management activities, patients' safety in the waiting area, and environmental hazards. This deficient practice greatly improved to reach the majority of them had practices correctly immediately after program implementation and at their follow up evaluation. This finding was also agreed with Kerie et al., (2018), who stated that greater than half of the nurses had a moderate level of triage skills before training in a study conducted in Addis Ababa, Ethiopia. A similar result reported by Aloyce et al., (2014), who indicated that the level of triage nurses' skill was 52% before triage education in a study conducted in Dar Es Salaam, Tanzania. This result was accordance with Rahmati et al., (2013), who found that the level of knowledge and practice in triage after the intervention was higher than before training with a statistically significant differences between phases of program evaluation in a study conducted in Vali Asr Hospital of Fasa University of Medical Sciences. Haghdust et al., (2010) when reported comparable findings. The studied nurses showed moderate to excellent performance before training, but none of the participant exhibit poor

performance after training. The poor performance before training in the current study might be due to their deficient knowledge, absence of orientation for newly graduated and newly recruited nurses, lack of job training, continuous education. Also, unavailability of resources, and insufficient materials, equipment in most governmental hospitals. Moreover, overcrowding in governmental hospitals emergency departments, which lead to an increase in the workload on nurses caring for such a group of patients that result in inappropriate nursing care. This explanation emphasized by several studies. Goransson et al., (2006) reported that 65.4% of emergency nurses did not attend training regarding triage skills in Indonesia. In Sweden, 60.3% of the nurses did not attend any triage training (Fathoni et al., 2010). A study conducted in Switzerland reported a comparable finding of 59.6% of the nurses lacking the appropriate triage training (Jordi et al., 2015). This finding is supporting the second research hypothesis. John & Sons, (2014) reported similar findings and emphasized that the educational training of triage is essential than work experience (that not grounded on a sound base) in triage decision making (Considine et al., 2007).

The current study also, denoting to the stability of knowledge and performance improvement with a slight decrease when comparing the post and follow up evaluation of the studied nurses. Nurses clarified this finding of forgetting some non-important, less familiar topics, and focus attention only on the typical case situations. The stability of the performance level has examined in many studies. One of these studies is Corner, & Wilson-Barnett (1992) study. They reported a nurses' performance level declining after three months of training. An earlier study by Gould & Chamberlain (1994) explained that most of the nurses forgotten or pay less attention to the practical part of the training, hence affecting their performance. This finding emphasized the need for continuous education, particularly in such critical areas of care (Rahmati, et al., 2013). The current study showed that there is an improvement in nurses' whole attitude immediately post and one month after program implementation as the number of nurses with a positive attitude increased with a highly statistically significant difference ( $P < 0.001$ ) between pre, post, and follow up. This finding may be due to that the triage education had a noticeable effect on enhancing nursing performance through the program implementation phases. A strong positive attitude revealed by Afaya et al., (2017). The majority of nurses (92.3%) supposed triage system should not only be implemented in ED but also in all departments of the hospital. A higher number of nurses, 62 (95.5%) agreed and strongly agreed that nurses at ED should undergo training/workshops on triage.



Furthermore, Mohey & Alazmi, (2017) stated in his study that, about half of the studied physicians (49.8%) agreed and 47.1% of nurses strongly agreed that emergency services were an essential component of primary health care. This further supports the third study hypothesis.

From the results of the current study, it evident that education and training courses have a vital role in improving nurses' knowledge, performance, and attitude toward triage education.

## CONCLUSION AND RECOMMENDATIONS

Based on the findings of the present study, it could conclude that the nurses who are subjected to triage education improved in their knowledge, practice, and attitude at the post- intervention evaluation compared to their pre-intervention level. Moreover, they showed a higher knowledge, competent practice, and positive attitude that maintained at one month follow up with a statistically significant difference among the three phases of the study. So, it could be evidenced that triage education program improved nurses 'performance regarding the application of triage for adult, pediatric, and obstetric emergency departments. Based on the findings of the study, the following recommendations are suggested:

- Publication and dissemination of the guideline educational program in ED service to improve nurses 'performance about triage for adult, pediatric, and obstetric patients.
- There is a constant need to foster and sustain the improvements in practices regarding triage in ED through the orientation of new nurses, on the job training, and continuous education.
- A further longitudinal study should be done to evaluate the effect of the researchers' guideline educational program on the nurses' performances toward triage in ED .

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## FEAUTES OF LANDSCAPE DESCRIPTION IN ZHIYENBAI IZBASKANOV'S LYRICS

**Dosimbetova Abadan Aliyevna**

*Candidate of Philological Sciences, Assistant Professor, Karakalpak State University named after Berdakh, Nukus, Karakalpakstan, Uzbekistan*

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### ABSTRACT

*The article studies the descriptive features of landscape lyrics by the poet Zh. Izbaskanov. Based on the analysis of a number of poem of the poet beautiful aesthetic service of landscape images are revealed. Depending on the genre of characteristics of landscape imagery have been identified. The poet's ability to create an objective image is analyzed on the basis of landscape poems. In the lyrics of the poet, the uniqueness of artistic thought and poetic thinking are studied.*

**KEYWORDS:** Karakalpak literature, Modern Karakalpak poetry, Zh. Izbaskanov, Landscape lyricism, lyrical protagonist

### INTRODUCTION

Modern Karakalpak poetry, reflecting the spirit of the new era, is developing as an integral part of the artistic and aesthetic consciousness of our society, our spiritual culture.

The poets are conducting research in the way of artistic expression of human spiritual forgiveness, which is the main task of poetry, especially lyricism. Zh. Izbaskanov, a well-known representative of modern Karakalpak poetry, contributes to the ideological, thematic, genre and artistic development of Karakalpak poetry through his educational research. The poet, in particular, is known for his unique educational style in these areas, creating wonderful patterns of landscape lyricism. In this article, we aim to talk about the peculiarities of resin in the use of landscape, the artistic and aesthetic function of landscape images in resin compounds.

It is known that in the science of Karakalpak literature there are a number of research works, scientific articles on the nature of lyric poetry, the theoretical foundations of the image of the lyrical hero. (1) A number of scientific articles were published by scientists on the works of Zh. Izbaskanov, including various of theoretical issues. In this regard, we can mention the scientific articles of T. Mambetniyazov, K. Zharimbetov, Zh. Yessenov, K. Orazymbetov, P. Nurzhanov and others.(2).However, the artistic and aesthetic features of landscape images in the lyrics of Zh. Izbaskanov have not been studied on their own. This describes

the urgency of the issue we are going to address in our article.

### RESULTS AND DISCUSSION

Poet Zh. Izbaskanov entered our poetry in the last quarter of the XX century and from that time he became known for his lyrical works in newspapers and magazines. He encouraged his readers with his "Ballads about Horse" (Nukus, 1975), "When Summer Passes" (Nukus, 1979), "From the Notebook of Lyrics" (1982), "Passion for Life" (1987), "Diamond Edges of Love" (1990), "Love Lyre" (1992), "The Day I Waited for" (1993), "My Ways Are Long" (1995), "My Legend" (1997), Collection of Selected Works (1999), "White Birds" (2014) and others. Zh. Izbaskanov is the author of several poems. Resin compositions are based on deep lyricism, concise thoughts, figurative descriptions. The poet enriched Karakalpak poetry with his ideological, thematic, genre and form studies and contributed to the development of free verse in Karakalpak poetry as a lyrical form. He is a resin who has his own way of education and personal style in Karakalpak poetry. In particular, Zh. Izbaskanov is known as a master of landscape lyricism, a "singer of nature". Poet's contribution to the enrichment of our literature was appreciated and he was awarded with the Republican Prize named after Berdakh, the titles of folk resin of Uzbekistan and Karakalpakstan.

In Zh. Izbaskanov's landscape lyricism, the lyrical protagonist is a true lover of the native land,



who grew up with its nature, expanses, willows, twigs, birds, and loves the nature of his homeland with all his heart, both joy and sorrow which took place in human form. In landscape compositions, resin often depicts spiritual forgiveness by enlivening the scenes of nature, that is, by imparting human qualities.

Landscape lyricism is the illumination of the spiritual experiences of man through the depiction of natural phenomena and the discovery of the relationship between nature and man, society. Poets create an artistic and aesthetic effect of the mixture by changing the colors and appearance of nature. Pupils see the new way of aesthetic beauty from natural conditions with the help of landscape of lyrics.

Zh. Izbaskanov's various aesthetic aims arise particular differences of landscape in compositions. The poet possesses specific writing style of conveying a person's mood and spiritual state through natural forces. The poet had creative researches in this direction and consequently illustrate a wide range of poetic ways.

In his poem "The views of autumn" the hero's spiritual conditions are displayed along with the views of autumn.

Wrapped into silver  
Getting quiet around  
Having hung just yesterday  
Today the leaves are lying.

It seems to be symphasizing  
The autumn wind kisses me on the face  
Why does the place of love  
Destroy those high trees.

Here, the poet describes the lyric hero's spiritual conditions through especially the colors of nature. He moves away the hero's spiritual dejection into nature by saying "wrapped into silver". Usually, autumn is described as golden, but in this poem it is displayed as silver, because the poet tried to convey a despair of autumn and he succeeded in completing it. Clearly, the lyric hero's dejection is passed along with gloomy view around. Succeeding in aesthetic results through the colors of nature is a specific particularity of lyrics of landscape. The yellowing of the leaves is an artistic illumination of autumn nature. The lyrical protagonist's spiritual experiences are mixed with nature. In the next lines of the poem, the lyrical protagonist's spiritual experiences are gradually adapted through his connection to nature. The fact that he suffered from a "merciless fate" makes his soul uneasy. At the same time, autumn scenes serve as an artistic and aesthetic service, illuminating the feelings of depression and forgiveness of the lyrical hero. The reason for the lyrical protagonist's depression is due to his "prematurely ended love." The poet assigns a special poetic task to the colors of autumn nature ("silver",

"yellow") and events ("stalks") to convey the sorrows of premature, that is, late love.

The poet's poem "Spring Rain" depicts a view of nature - when it is raining. In the poem, when it rains, it is described in such a way that it creates a new, pure, pure feeling for the lyrical protagonist's spiritual world. Usually, raindrops shake the human body, make an unpleasant touch, the person runs away from it and comes to the shelter. It's completely different when you're a lyrical hero. He, on the contrary, "moves forward in the rain," and the raindrops do not shake him, but "move forward." It means that the lyrical protagonist is in love with nature, unique in being able to accept any appearance of his with his heart.

Clouds in the distance,  
He walks off the road.  
The mysterious pattern of the sky net,  
They decorate.

In poetry, the cloudy sky, often given as a manifestation of a gloomy mood, creates a new literary look for the poet even from the movement of the clouds. The lyrical protagonist of the poem understands the beauty - the mysterious pattern, which is not taken into account by anyone except the "off-road travel" of the clouds in the distant sky.

In the next lines of the poem, the purification of nature after the rain awakens renewal in the spiritual world of the lyrical hero, pure feelings, passion for the beauty of life, the desire for good.(And in front of me there will be a pleasant surprise - the steppe is beautiful.)

The bluish willows are all around  
Low rhythms.  
A drop of humus on the first leaf  
It's slippery.

The real dialectic of life is reflected in these series. The sliding of a silver drop on the first leaf of a willow tree after the rain illuminates the season of awakening, the transformation of nature, the rejuvenation of life, the spark of new hope in the heart of the lyrical hero, the feelings of love for life and surroundings. The cheerful depicts the landscape in such a vivid and imaginative way, even we want to grab a drop of silver slipping on the first leaf. It is considered to be the creation of aesthetic beauty from the natural phenomenon which explains the art of creating an artistic image of the resin.

In the composition of the resin, called "Seashore", it creates an aesthetic effect by vividly illuminating the concrete landscape.

The blue sea swayed in the gay,  
He quit his job as a gay man.  
There was a vibration on his face,  
The waves hit the shore.

Longing for her,  
Dream, maybe there is,  
Constantly striving for Balent,





Thousands of drops splash. [4, 8]

The appearance of the sea bet, in which the swam and swam, is beautifully depicted. The poet sees an unusual beauty from the turbulent flow of the sea. The appearance that others do not remind of "drops that chop to the height" "on the water sheet". Here is a very wonderful beauty from this view, the aesthetic beauty of a person creates a provocative brilliance of the moon-thoughts, especially the eye-illlogical processes that can irritate sensitive souls on the surface of the sea, the poet clearly describes this process, sitting down and teaches the reader the aesthetic zest of landscape views. landscape lirikasin sit in the study and often vividly portray the exact processes of the appearance of nature in it fall.

At the same time, the poet observed that the lyrical process of depicting the natural processes that depend on the seasons of the year depends on the winter, spring, summer, autumn seasons in the lyric poetry, the spiritual experiences of the lyrical hero are different from those that give. At the same time, the poet observed the depiction of the processes of nature, tied to the seasons in the lyrics, the spiritual experiences of the lyrical hero through the processes of nature, connected to the seasons, give position.

The poem "autumn elegy" describes the sad mood of the lyrical hero through the appearance of autumn. The composition of the poem begins with a series "I think you" and ends with this series. From the same line-it is known that the White lyrical hero has a direction in which the spiritual experiences are directed, that he needs someone, that the feelings of longing are tormented. The trees spilled on the leaves of the evening, buried in the moon Shule, covered with frosts, fly towards the big dream - these are the processes that recognize the nature of autumn. It has completed the service of giving processes of landscape depiction lyrical hero's spiritual world. The spiritual world of the lyrical hero the foliage, frosty, shriveled, covered with Frost to the loss, like spilled trees, the rustling of Thorns is like the screams of his drinking longing. And all this was considered-the appearance of spiritual experiences of the lyrical hero. The spiritual world of the lyrical protagonist is like a field where the leaves have fallen, the fields are covered with frost, the frost is cold, and the willows of the cranes are his inner nostalgia. All of this is a beautiful manifestation of the lyrical hero's spiritual adventures. The lyrical protagonist's spiritual world is shaken by feelings of nostalgia and separation. In the following lines of the poem, the poetic novelty of the poet stands out:

If the leaf of my soul,  
It was a dream come true,  
I miss you so much  
Even if I know you can't deliver ?!

The whirlwind of leaves blowing in the wind is like a mirror in nature. The poet translates it into the spiritual world of the lyrical hero. The lyrical

protagonist's heart is full of "distant milk", "the last hope" and his "leaves of the soul" - this is a real emotional state of mind, a different way of thinking.

Zh.Izbasqanov's individual uniqueness in illuminating the artistic content is more noticeable in connection with the scenes of the autumn season in his landscape lyrics. The poet tried to create some kind of beauty from the mirror nature, and the inner world of the lyrical hero was enriched by the mirror landscape.

The poet's new artistic thought is also reflected in the poem, which begins with "A leaf in the eye is a torn leaf - a flame". The object of the painting in the spoon begins with the black willows, and the appearance of the black willows resembles a fat yellow turnip. The beauty of the moon was gradually enhanced, and the yellow leaves were given as "the palms of the willows" and "the palms of the eyes."

My heart was pounding like a willow tree,  
Sighing from the long-suffering longing,  
Golden eye breath, glowing face,  
My face was grinning sharply. [6, 394]

Poet parallels the spiritual world of the lyrical hero psychologically with the scenes of autumn nature. The object of the painting now unites nature and the lyrical protagonist, "the fiery look of the autumn palm makes his face tingle." The yellowing and tearing of the leaves - this condition, which is a daily, opium-like appearance for others, gives a different impetus to the resin, touches his heart and emotions, and this condition is perceived by readers. Both the main theme of the poem and the uniqueness of the landscape lyricism are that the poet teaches his students to take a conscious look at the phenomena of nature, to understand the subtle mysteries of nature. In the autumn, the resin realizes some mysterious idea of the yellow leaves falling from the black willows like a flame and connects it with the phenomena of life.

In a number of autumn compositions, such as resin, the landscape has a special artistic and aesthetic function. In addition to the beginning of "Autumn in the air", the falling of leaves gives the lyrical hero a "mysterious feeling".

Fall around.  
When you think about it  
I miss much.  
Will the mood fly away? -  
The time will pass fast  
A sweet feeling. [6, 395]

Underlying this mysterious feeling is whether the lyrical protagonist misses, or longs for a blossoming youth, or regrets the transience of life - this is understood in the reader's perception, because it can move him with the "mystery" of the feeling. And "Saske's time. The sun. The sun is silent." In addition, it creates a new image from the appearance of autumn willows.



The willows are thick,  
To stay naked  
"Ashamed" perfume...

Poet thinks in a new artistic way, creating an artistic image through animation. He vividly illuminates the struggle for life, the desire to preserve the beauty of youth with the help of landscape images.

In addition to the beginning of "Unatarman", the lyrical hero sees "a thousand dreams" and "nalysh" in the autumn journey of cranes. In this way, the resin expresses the lyrical hero's feelings of love for his homeland through a series of cranes.

## CONCLUSIONS

In short, in the lyrics of Zh. Izbaskanov through landscape depictions, the cheerful lyrical protagonist artistically illuminates the spiritual experiences, inner feelings, creates aesthetic feelings from the scenes of nature.

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## ECO SPIRITUALITY: A QUALITATIVE ANALYSIS IN DIVERSE FAITH

Sana Irshad <sup>1</sup>, Sumaila Parveen <sup>2</sup>, Afreen khan <sup>3</sup>

1, Research Scholar Dept. of Psychology Aligarh Muslim University, Aligarh (India)

2, Research Scholar Dept. of Psychology Aligarh Muslim University, Aligarh (India)

3, Research Scholar Dept. of Psychology Aligarh Muslim University, Aligarh (India)

### ABSTRACT

*The present article is an attempt to study the spiritual connection between the human soul and the environment. This critique talks about the various faiths of people and the nature. Eco-spirituality links together the diverse faith of religion including: Islam; Jainism; Christianity; Judaism; Hinduism; and Buddhism and the individual concern for the Earth. Thus, 'Eco-spirituality is about serving people understanding 'the holy' in the natural world and to identify their relationship as human beings to all creation.*

**KEY WORDS:** Eco Spirituality, environment, various faith,

### INTRODUCTION

In contemporary years the significance of conservation as well as ecological preservation has been greatly realized (van Schalkwyk, 2011). The discrepancy of ecosystem created due to the phenomena like climate change, degradation of environment and global warming and depletion of natural resources, namely, food, water, and energy demand to protect and preserve our ecosystem (van Schalkwyk, 2011). The rising of ecological calamity response several scientists, sociologists, environmentalists, philosophers, theologians, and anthropologists, relate the cause of modern ecological crisis in various perspectives (Saniotis, 2012:156; Setia, 2007:117; Khalid, 2005:101).The crisis is complex issue, which includes various problems like spreading of technology, poor science, economic and social development model, but to find the original resources of ecological crisis roots must be started from addressing the inner dimension of ecological spirituality of world religions (Watling, 2009; Schalkwyk, 2011; Spoon & Arnold, 2012).So, The association among nature and humanity is reciprocal, holistic, and spiritual (Clinebell H., 1996).According to Withgott & Brennan, (2008) an increase knowledge and awareness about earth's environment and teach skills that lead to actions that will ensure its protection is the purpose of environmental education .The spiritual ecologists has been acknowledged that the creation is sacred and this sacredness should be established by an individual behaviour. (Macy, 2012).The respect of strong

connections with ecosystems of the natural habitat amongst the communities stimulated a sense of societal spiritual harmony. (Korten,2013). Thus, an incorporated path is taken by spiritual ecology where it identifies that all the diverse components of the ecosystem together with human beings function as a unit. As Mahatma Gandhi told us that "Nature has enough for everybody's need, but not for everybody's greed" (Dwivedi 1990: 211).

According to Buzzell, (2014) and Jordan, (2015) labelled the human-nature-relationship through connecting and reconnecting with natural processes as described as the process of healing.To aid and to reach better wellbeing as well as happiness for individuals, society and the planet, based on the principles of brotherhood among all life-forms, freedom of thought and speech and free access to knowledge is the main aim of Eco spirituality. The term Eco spirituality means a person individually experienced an inner peace of harmony a relationship with his environment. Some of the definitions of ecospirituality include "a manifestation of the spiritual connection between human beings and the environment" (Lincoln, 2000)and "understanding the interrelationships between all living beings on earth and recognizing their interdependency while appreciating their value for maintaining ecobalance" (Bonfiglio, 2012; Drengson, 2012).The connectedness between spirituality and the science of ecology is define as eco spirituality(Bonfiglio, 2012). Aburrow (2013) states that Eco spirituality has been subjective by beliefs from deep ecology, whereas



ecopsychology deals with the science of ecology and psychology.

Taylor (2004) which indicated that the perception of the individual religious beliefs or practices by respect to anything as a form of nature worship. He classified it to three types

1. Environmental concerned world religions.
2. nature as sacred religion and
3. The spirituality of connection to the nature.

According to Rice, (1999) it had been said that "religion, in its diversity of source, its recognition of and encounter with moral and spiritual to the nature, leading to understanding and deepening ecological spirituality can be useful in addressing ecological issues and stimulating a new implement of balanced business and environmental consciousness"

Thus, Ecospirituality is a science that connects the ecology with spirituality. It brings together religion and environmental activism.[1] Eco spirituality has been defined as "a manifestation of the spiritual connection between human beings and the environment." [2] Many faiths including: Islam; Jainism; Christianity, Hinduism talks about it. Therefore, "Eco-spirituality is about serving people understanding 'the holy' in the natural world and to identify their relationship as human beings to all creation. (Wikipedia).

### ECO SPIRITUALITY IN ISLAMIC PERSPECTIVE

The shari'as of Islam talk a number of written sources that environmentally concentrated strategies to push environmentalism, especially, "maintenance of preserves, distribution of water, and the development of lands." Much of the follower of Muslim in islam are environmentalism the Qur'anic stress of stewardship which is explained through the Arabic concept *khilafa*. A quote translated from the *hadith* states, "verily, this world is sweet and appealing, and Allah placed you as vice-regents there in he will see what you do. Therefore, Within the Islamic perspective toward nature and the environment the struggles of Muslim's practices in environmentalism can be also useful to build Islamic ecological spirituality based on their reflections on the Qur'an way as an Islamic business framework (Beekun & Badawi, 2005). (Wikipedia).

### ECO SPIRITUALITY IN PAGANISM PERSPECTIVE

One of the nature-based religions that present in a multitude of forms is Paganism, in this creed there is no official guideline or sacred text that structures its exercise, many Pagans consider that Eco spirituality is an ecology-based religion that focuses on the nurturing and healing of the earth .Thus, paganism is nature based in worship. (Wikipedia). Their four goals are as follows

1. Increase overall consciousness of the sacredness of the Earth.
2. Boost pagans to become involved in conservation work.
3. Encourage pagans to become involved in environmental campaigns.
4. Develop the principles and practice of magical and spiritual action for the environment.

### ECO SPIRITUALITY IN HINDUISM PERSPECTIVE

Many traditions in Hinduism are intertwined with the morals of eco spirituality in their stress on environmental wellbeing. In the Hindu text *Yajurveda* (32.10), God is defined as being present in all living things, further reinforcing the need to show respect for creation. [4. *Vishnu Purana* 3.8.15. States that, "God, Kesava, is pleased with a person who does not harm or destroy other non-speaking creatures or animals." [4] thus, it affirm a broader type of eco spiritual connection to the Earth. (Wikipedia).

### ECO SPIRITUALITY IN JAINISM PERSPECTIVE

The principles of the Jaina tradition are rooted in environmental practices. The belief in Jaina is "fundamentally eco-friendly, Jains are "quite self-conscious of the ecological suggestions of their core teachings." Jain teachings center on five vows that lead to reverse the flow of or release karma. One of these vows is ahimsa or non-violence. Thus, Jaina connection to nature is contributing to ecospirituality. (Wikipedia).

### CONCLUSION

Eco spirituality is the fundamental belief in the sacredness of nature, earth and universe.it connects the science of ecology with spirituality. Hence it refers to the intertwining of intuition and bodily awareness pertaining to a relational view between human being and the planet and a manifestation of spiritual connection between human being and the environment. Thus, its brings together religion and environmental activism

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# EFFECT OF SELF MANAGEMENT TECHNIQUE IN REDUCING STEALING TENDENCY AMONG SECONDARY SCHOOL STUDENTS IN ANAMBRA STATE, NIGERIA

Prof. G.C. Unachukwu<sup>1</sup>, Nwosu Adaobi Anastesia<sup>2</sup>

<sup>1</sup>Professor, Department of Educational Foundations, Nnamdi Azikiwe University, Akwa, Anambra State, Nigeria.

<sup>2</sup>PhD Research Scholar, Department of Guidance and Counselling, Nnamdi Azikiwe University, Akwa, Anambra State, Nigeria.

## ABSTRACT

This study sought to investigate the effect of covert positive reinforcement technique in reducing stealing tendency among secondary school students in Anambra State, Nigeria. One research question guided the study while one null hypothesis was tested at 0.05alpha levels of significance. A pre-test, post-test non-randomized control group quasi-experimental design was adopted and used for this study. A sample of 108 students with stealing tendency was selected from a population of 201 students. A purposive sampling technique was used in choosing two schools in the area of the study. All the two groups were pre-tested and post-tested using stealing tendency Questionnaire (STQ) designed by the researcher and validated by experts in measurement and evaluation. Data was collected for the study through direct delivery approach. Data collected were analyzed using Mean for answering hypothesis and ANCOVA in testing the hypothesis. Results obtained from the study indicated that Covert positive reinforcement technique is effective in reducing students' stealing tendency in secondary school students technique was effective in reducing stealing tendency among secondary school students. Based on the findings, the researcher recommended among others that teachers should refer students identified with stealing tendency to the school guidance counsellors for proper diagnosis of the problem and counselling using the covert positive reinforcement technique.

**KEYWORDS:** covert positive reinforcement technique, stealing tendency, school students, Anambra state

## 1. INTRODUCTION

Globally, students in secondary could be seen as the future generations and leaders because they possess the required human and intellectual resources needed for the continuity of the entire nation. However, in Anambra State, today, habitual stealing in children and youth has become a major social problem which has the tendency to lead to other unlawful behaviour being manifested among students today in Anambra State. Today many of the school, especially those of secondary schools have records of reported stealing within the classrooms and school environment, which have negatively affected the educational, spiritual, economic, physical, psychological and social adaption of the students. Some severe forms of these behaviors many a time tend to indicate a more serious psychological problem.

Stealing among secondary school students has long been a source of concern in Nigerian school systems, particularly in secondary schools. Ekpo and

Ajake (2013), for example, claimed that there are significant rates of secondary school complaints about stealing inclination and theft, which must have been influenced by the child's upbringing. However, the term "tendency" refers to a person's propensity of engaging in a specific behaviour or action (Anyamene, Nwokolo & Maduegbuna, 2015). Kendal (2012) defines tendency as a strong chance that something will happen in a particular way. In the light of the above definitions stealing tendency means a high possibility, disposition or likelihood that a person or student would take someone's or fellow students' property without his or her consent. It is a characteristic manifestation, traits and attitudes and moves towards stealing.

Stealing tendency increases the possibility of envious thoughts, feelings and psychological disorders to intend to take people's belongings without their consent. Secondary school students' stealing tendency is aroused by a lot of risk factors like – antisocial, peer groups and poor parenting



practices, Grant and Cavello (2011). Poor parenting was observed as one of the strongest predictors of students' antisocial behaviour. Most secondary school students intend to steal for a number of bad reasons. Children especially the adolescents, who have not developed sufficient impulse control intend to steal in order to achieve their heart's desires as to belong, when they cannot obtain desired goals from honest means. The adolescents may intend to steal to boast their ego, to boast their feelings, to maintain parental approval, to show unresolved anger or revenge and other reasons. They may have done all these things intentionally or unintentionally, but the truth remains that these students have the tendency to steal. These students, who intend to steal, often express distorted feelings of anxiety or anger, rage or depression resulting from disappointment in their life's expectations.

Stealing among secondary school students is a very serious maladjusted behaviour that needs serious attention. Often, parents and teachers tend to use punitive measures like canning, kneeling down, suspension and other punitive measures to correct students who stole others things in schools, homes and elsewhere. Such measures however does not seem to have yielded any positive results. Today, despite all the punishment mated to these students who engage themselves in stealing behaviour, most of them have not quitted the stealing and many still show signs of stealing tendency.

Although studies have been conducted to understand factors that contribute to the adolescents' tendency to engage in stealing, not much has been done empirically to ascertain the efficacy of psychological techniques in the reduction of stealing tendency among secondary school students. Obalowo (2004) investigated the effect of cognitive restructuring and contingency management in the treatment of stealing tendency amongst some Nigeria adolescents. Such studies proved that behaviour disorders like stealing tendency is a problem that could be modified using psychological techniques,

Based on this, the issues of secondary school students' stealing tendency have remained a source of upset, shock, worry and disturbance to school guidance counsellors, researchers, teachers, parents and other stakeholders in the society. It is against this background that the researcher was motivated to investigate the value of both the self-instruction and covert positive reinforcement techniques on stealing tendency among secondary school students in the study area which were effective. Current interventions for the treatment of stealing tendency include behavioural family modification therapies which aim at minimizing the secondary school students' behaviour by restructuring the family environment that changes the adolescents stealing tendency (Sanders, 2008). This

form of intervention has been observed to record low results, and produced less important changes in both parents and students follow-up treatment.

According to Lounge (2014), there are several degrees of psychological and behavioural modification treatments that have extremely beneficial outcomes on kids that engage in maladaptive behaviour such as stealing. Going by its efficiency in altering other maladaptive behaviour, covert positive reinforcement might be one such efficient approach in dealing with stealing inclination. According to Rafferty (2010), the self-instruction approach is an intervention treatment that entails teaching a student how to utilize self-positive statements to guide his own behaviour or activities in order to become a self-independent, self-adjusted, and self-sufficient human.

Furthermore, another proven approach that significantly reduced stealing inclination among secondary school pupils is covert positive reinforcement. Covert positive reinforcement techniques are a type of behaviour modification treatment that is used to treat psychiatric problems, including the desire to steal. It is a strategy for changing maladjusted behaviour that represents the appraisal of distorted behaviour and acknowledges intimate experiences.

### Statement of the Problem

Stealing among students has long been an unpleasant, surprising, and distressing problem in Nigeria's educational system, notably in Anambra State. Given the overwhelming negative consequences for offenders, parents, fellow students, guidance counsellors, teachers, and society at large, there is a clear option for all: students stealing in all forms have destructive, dehumanizing, and dysfunctional effects on the lives of offenders, other students, and others. When such those with stealing tendency are not discovered and modified, it may lead to additional crimes, particularly violence, which may result in the end of their lives or life in prison.

Furthermore, several current alarming issues affecting Nigeria today, such as the economic crisis, unemployment saga, abject poverty, hunger, and other challenges, may encourage Nigerian teenagers to steal. The inability of some parents, teachers, school guidance counsellors, and the government to meet the demands of today's youths has forced today's youths and secondary school students to confront unresolved problems, decisions, and conditions over which students, their parents, teachers, and the government have little or no control, making growing up today vastly different from that of ancient times. However, the failure of parents, teachers, guidance counsellors, and the government to reach an agreement with children leaves them angry, distrustful, and unhappy, and they



may develop a thieving propensity, causing difficulties for themselves, parents, school authorities, and society at large.

Currently, as a result of the aforementioned obstacles to secondary school students, there is a greater severity and possibility of pupils stealing, which has resulted in significant disorder, anarchy, disillusionment, and retrogression in the country as a whole. All of this led the researcher to believe that non-punitive methods, such as psychological behavioural strategies such as self-instruction and covert positive reinforcement techniques, were needed to reduce secondary school pupils' stealing inclination in Anambra State, which proved beneficial.

## 2. OBJECTIVES OF THE STUDY

The main purpose of this study was to determine the effect of covert positive reinforcement techniques on stealing tendency among secondary school students in Anambra State. Specifically, the study intends to determine:

- 1) the effect of covert positive reinforcement technique, on stealing tendency among secondary school students in Anambra State when compared with those in the control group using their pre-test and post-test mean scores.

### Significance of the study

The findings of this study would be beneficial to the students who have stealing tendency, Guidance Counsellors, teachers and parents. The reason is that students who have stealing tendency would likely benefit from the technique in modifying their intended urge or likelihood to steal. This counselling technique would help the school guidance counsellors, to control and reduce the harrowing experiences they normally have in trying to control students likelihood and urge from taking fellow student's belongings without their consent. The results of this study would also serve as a base for further researches in the area under study and other places.

### Research Questions

The study was guided by the following research questions.

- 1) What was the effect of covert positive reinforcement technique on stealing tendency among secondary school student, when compared with those in the control group using their pre-test and post-test mean scores?

### Hypotheses

The following hypothesis was tested at 0.05 levels of significance.

- 1) There was no significant difference in the effect of covert positive reinforcement technique on stealing tendency among secondary school student when compared with those in the control group treated with conventional counselling using their post-test mean scores.

## 3. METHODOLOGY

These are the procedures that were employed in carrying out the study. The study adopted quasi-experimental research design of pre-test and post-test non-randomized control group. This is non-randomized pretest-posttest control group design comprising of an experimental (treated with covert positive reinforcement technique) and control group (treated with conventional counselling).

This study was conducted in Awka South Local Government Area (LGA) in Anambra State of Nigeria. Awka South Local Government Area is one of the LGA in the state capital city of Awka.

## 4. SAMPLING DESIGN

The samples for the study comprised 73 students. These comprised samples of both the junior and senior secondary school students with stealing tendency. The sample was chosen from a population of 201 students identified with stealing tendency in secondary schools in Awka South LGA. Purposive sampling technique was used in selecting two schools that has the highest number of students with stealing tendency. Students from these selected school made up the sample size.

## 5. INSTRUMENT FOR DATA COLLECTION

The instrument that was used to identify students with stealing tendency is referred to as "Stealing tendency Questionnaire (STQ)". The instrument was developed by the researcher and validated by experts in Guidance and Counselling and Measurement and Evaluation. The instrument is composed of 20 items measuring individual's stealing tendency as it relates to peers interaction, home and school and the students' acceptance or non-acceptance of the stealing. The instrument has an internal consistency reliability coefficient of  $r=0.72$ . Stealing Tendency Questionnaire (STQ) was administered to the students in the two sampled groups of secondary schools by the researcher with the help of four trained research assistants. Data was collected before treatment and after treatment.

## 6. EXPERIMENTAL TREATMENT PROCEDURE

The researcher obtained permission from the principals of the schools where the study was





conducted. The experimental therapy was carried out in the schools' counselling centres on the specified treatment days, with the permission of the school principals. Each of the schools that were chosen constituted a treatment group. The therapy regimens lasted eight weeks in a row.

### 7. STATISTICAL DESIGN

The completed instruments were scored following the scoring instructions provided in the STQ manual. Data was analysed using the Statistical Package for Social Science. Research questions were answered using mean while hypotheses were tested

using Analysis of Covariance (ANCOVA) at 0.05 level of significance.

### 8. RESULTS

Data from the field of study are shown in the table as follows:

#### Research Question

What was the effect of covert positive reinforcement technique on stealing tendency of secondary school students when compared with those treated with conventional counselling using their pretest and posttest scores?

**Table 1: Pretest and Posttest mean scores on stealing tendency of students treated with covert positive reinforcement and those treated with conventional counselling**

| Source of Variation                 | N  | Pretest Mean | Posttest Mean | Lost Mean | Remark    |
|-------------------------------------|----|--------------|---------------|-----------|-----------|
| Covert positive reinforcement Tech. | 24 | 56.92        | 34.04         | 22.88     | Effective |
| Control                             | 21 | 55.05        | 51.67         | 3.38      |           |

Table 1 indicated that the students treated with covert positive reinforcement technique had pretest mean score of 56.92 and posttest mean score of 34.04 with lost mean 22.88 in their stealing tendency scores, while those in the control group who were trained with conventional counselling had pretest mean score of 55.05 and posttest mean score of 51.67 with lost mean 3.38. With posttest mean of 34.04 which is below 40.00 covert positive reinforcement technique

is effective in reducing students' stealing tendency in secondary school students.

#### Testing the Null Hypothesis

The effect of covert positive reinforcement technique on stealing tendency of secondary school students is not significant when compared with those treated with conventional counselling using their posttest mean scores.

**Table 2: ANCOVA on the effect of covert positive reinforcement technique on stealing tendency of secondary school students compared with those treated with conventional counselling using their posttest mean scores**

| Source of variation | SS        | df | MS       | Cal. F | Pvalue | P ≤ 0.05 |
|---------------------|-----------|----|----------|--------|--------|----------|
| Corrected Model     | 3543.734  | 2  | 1771.867 |        |        |          |
| Intercept           | 155.162   | 1  | 155.162  |        |        |          |
| Pretest             | 64.559    | 1  | 64.559   |        |        |          |
| TreatmentModel      | 3512.632  | 1  | 3512.632 | 189.86 | 0.000  | S        |
| Error               | 777.066   | 42 | 18.502   |        |        |          |
| Total               | 84712.000 | 45 |          |        |        |          |
| Corrected Total     | 4320.800  | 44 |          |        |        |          |

Table 2 shows that at 0.05 level of significance, 1df numerator and 44df denominator, the calculated F is 189.86 with P-value of 0.000 which is less than 0.05. Therefore, the first null hypothesis is rejected. So, the effect of covert positive reinforcement technique on stealing tendency of secondary school students is significant.

### 9. DISCUSSION

The results of the study were hereby discussed:

#### Effects of Covert Positive Reinforcement on Students' Stealing Tendency

Covert positive reinforcement was also found to be effective on stealing tendency among secondary

school students. In the hypothesis, it was observed that there was a significant difference between the post-test mean scores of the experimental group and the post-test mean scores of the control group. The experimental group post-test means scores was grossly reduced, more than the control group post-test mean scores. This means therefore, that the treatment had an effective impact on students' stealing tendency. These findings are similar to the findings of Grant and Carello (2011), Grant & Kim (2011) whose studies noted that when desirable behaviors are followed with immediate tangible rewards, and they become more frequent. It was therefore, observed that, the covert positive reinforcement technique was also effective on



stealing tendency among secondary school students in Awka Education Zone of Anambra State.

This finding is important because the seriousness of stealing in secondary schools today has become evidently unwholesome. In most cases teachers use punitive measures like the corporal punishment, manual labour, to check and control stealing tendency, which severally proved ineffective. According to Akinmoyewa (2007), punitive measures had often proved less effective. However, since covert positive reinforcement had proved effective empirically, their usages are therefore encouraged.

## 10. CONCLUSION

Based on the finding of this study, the researcher concludes that a covert positive reinforcement technique was significantly effective in modifying students' stealing tendency in secondary schools in Awka South LGA.

## 11. RECOMMENDATIONS

Based on the findings of this study, the researcher recommended that:

1. Teachers should refer those caught stealing and those that shows some inclination to steal to the school guidance counsellors for proper diagnosis of the problems, dialogue and immediate counselling before it goes out of hand, since it was observed and proved that these students always put to actions the urge to take peoples' things without permission because of their ignorance of the underlying detrimental consequences of stealing.
2. Guidance Counsellors working in schools should adopt the use of covert positive reinforcement technique in modifying students' tendency to steal.

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# FACTORS INFLUENCING ON CUSTOMERS DECISIONS TO PURCHASES ONLINE AND OFFLINE SHOPPING OF MOBILE PHONES

Ramatenki Dhanunjaya<sup>1</sup>, Dr.G.Srinivas Rao<sup>2</sup>

<sup>1</sup>Research Scholar, Department of Commerce

<sup>2</sup>Assistant Professor, Department of Commerce, Osmania University

## ABSTRACT

*The aim of the study is to examine the Factors influencing on customers decisions to purchases online and offline shopping of mobile phones. Data collected form 600 sample using convenient and snowball sampling and data were analyzing ANOVA and t-test using SPSS 21 version. The study result revealed that factors such as Discounts & offers, Convenience of the product, Easy and free availability of the product had no significance difference between online and offline purchases of mobile phones, similarly factors such as Product quality, Product variety, Customer service, Product Performance had shown significant difference between online and offline purchase of mobile phones in Telanagna.*

**KEYWORDS:** *Discounts & offers, Convenience of the product, Product quality, Product variety, Customer service, Product Performance.*

## 1. INTRODUCTION

Shopping is an integral aspect of daily life. While some obtain the bare necessities through shopping, others acquire something more. It is considered a technique to relieve tension, fulfil a mental goal, or give some flavour to the mechanical way of life. Shopping is perhaps one of the first phrases used to describe what we've been doing for centuries. So what does conventional shopping have to offer now that the Internet has given existing customers access to a larger and more appealing market? Shopping may be classified into two broad categories: conventional shopping and online shopping. Nowadays, an increasing number of individuals 'go shopping' over the Internet, owing to the computer's widespread use. By typing just a single word, thousands of products will appear on the screen depending on your selection. There is no need to wade over a long road and shove your way past bustling people to get a pair of posh shoes. Online shopping has become a more integral part of life in the twenty-first century. Its success may be attributed to the fact that convenience is prized in today's environment.

Online shopping enables you to get everything and everything you need, whether on a journey or getting ready for bed. Since the Internet's conquest, online shopping has become a popular means of shopping. The advancement of technology gives sellers excellent options to contact their customers

much more quickly, efficiently, and economically. Online shopping has exploded in popularity in recent years. Nowadays, the Internet commands the retail market's attention.

On the other hand, conventional market purchases have continued for years. Many buyers purchase offline to see the merchandise and take ownership of it immediately upon payment. In today's environment, consumer loyalty is contingent upon a company's constant ability to deliver on its promises of quality, value, and satisfaction. Some like to purchase offline, while others prefer to shop online, and many choose to do both. The research focuses on the consumer's decision to shop on the Internet or in brick-and-mortar establishments during the information-gathering time. However, internet buying is more convenient for consumers and more affordable than physical purchasing. When making a purchase choice, the customer should consider the purchase medium, whether online or offline. Consumers should choose the channel that best meets their needs and desires and satisfies them. Understanding how consumers choose a particular medium for purchasing things is critical from a management standpoint in today's competitive environment. After online shopping, the third-best and most common internet activity is e-mail use, instant messaging, and web surfing. These are even more important than viewing or being entertained on the Internet or obtaining information or news; these



are the two highly prevalent thoughts that spring to mind when thinking about what internet users do online. Online shopping behaviour is often referred to as online purchasing behaviour or internet shopping. Purchasing behaviour refers to the act of purchasing goods through the Internet using a web browser. The consumer's attitude and behaviour toward online buying are connected. Previous research has focused on the reasons why online shopping items are distinct from other products.

Many studies have focused on the high touch products that consumers feel when they need to touch, smell or try the product. Even with the growth of internet buying and the knowledge that it is more likely to exert pressure on offline or conventional purchasing, The research in this subject or field is quite limited. Online or e-shopping is a kind of electronic shopping that enables consumers to buy things directly from the vendor over the Internet through a web browser. Online shopping is also referred to as e-web store, e-shop, e-store, internet shop, web-shop, web-store, online storefront, and virtual store. Mobile commerce, or m-commerce, is buying from an online merchant using mobile-optimized internet sites or applications. The online channel is used for research, and the offline channel for purchase. The phrases "online" and "offline" have distinct meanings in the context of computer technology and telecommunications, where "online" refers to a connected state and "offline" to a disconnected one.

## 2. LITERATURE REVIEW

**Dr.Sivanesan, R., C, M., P.V., B., & S.A., A. (2017)** in their study tried to recognize that, how consumer measure channels for their purchasing; The objective of their study was to provide an impression of online shopping decision process by comparing the offline and online decision making and identifying the factors that motivate customers to decide whether to do online shopping or go for the offline shopping. The study found that female is more into online shopping than male. The people from the age group 35 and above are less likely to do online shopping because they are less aware of the technology.

**Sarkar (2017)** found that there is a significant difference between consumer purchase style in online and offline medium which is based on certain parameters. Despite the rapid growth in online sales in India and the projection of further uptick in this medium of shopping, the majority of consumers in India still prefers the so called 'real' shopping experience of brick and mortar shops, it's mostly the youngsters who are fueling the amazing growth story of online shopping in India. Advent of online medium of shopping has no doubt hit the offline stores hard. Large discounts offered by the e-tailers

have indeed put enormous pressure on their bottom line.

**Sinha, A. K., & Chandra, D. K. (2013)** analyzed factors affecting on online shopping behavior of consumers that might be one of the most important issues of e-commerce and marketing field. 100 questionnaires were dispersed among the citizen of Bhilai-Durg (Twin City) who were the consumers of Bhilai –Durg and the online shoppers. Regression analysis was used on data in order to test hypothesized of the study. The findings of their study were that there is strong correlation between age, income and education level with on-line shopping.

**Andrian & Sihombing (2014)** studied the factors that have influenced consumer purchase intention for online shopping. They examined the relationship between purchase intentions (dependent variable) and identified four independent variables which include utilitarian value, hedonic value, security and privacy. Data collected from 200 college students who have done online shopping at Traveloka.com websites by using non-probability sampling method. The data was analyzed by multiple regressions. This study shows the purchase intention influenced by utilitarian value and security. On other hand, hedonic value and privacy were not the factors that affecting the purchase intention.

**Ms. Jain, Ms. Goswami, & Ms. Bhut (2014)** studied the impact of Perceived Risk, Perceived enjoyment, Perceived usefulness and Perceived ease of use factors on online opping behavior of consumers in Delhi. The sample of the study comprised of 160 online shoppers from Delhi. Respondents belonged to different age groups, income groups and occupations and have a prior experience in online shopping. A pre – structured questionnaire was used with a 5 point Likert rating scale to measure the factors influencing the respondent's behavior to shop online. The empirical results revealed that only one factor, namely Perceived Risk significantly affected online shopping behavior of consumers in Delhi while Perceived enjoyment, Perceived ease of use and Perceived enjoyment hinders the consumers to shop online so the researchers suggests that the companies must focus on Perceived risks to develop consumers trust towards online shopping.

**Dr.Sharma, Dr.Mehta, & Sharma (2014 )** studied the online buying behavior of consumers in India. They also attempted to get information about the scope of improvement in online shopping website. They analyzed that the Indian consumers are also getting addicted to the online shopping and they do like various features of online shopping as by rest of the world.

**Dr.Nagra & Dr.R (2013)** used both qualitative and quantitative research methods to study the impact of Demographic factors of consumers on on-line



shopping parameters like satisfaction with on-line shopping, future purchase intention, frequency of on-line shopping, numbers of items purchased, and overall spend on on-line shopping. The results of study revealed that on-line shopping in India is significantly affected by various demographic factors like age, gender, marital status, family size and income and proved that the respondents have perceived online shopping in a positive manner.

**Dr.Hooda & Mr.Aggarwal (2012)** examined the key consumer behavior attribute and relation among them with E marketing perspective. They studied the acceptance rate of e-marketing among the Jaipur consumers and its impact on their purchase decision. The result of their study was that people irrespective of age and gender surf internet. However significant difference exists between the age and attributes of online trading but it do not have any relation with the gender. Most of the respondents are hesitant to purchase items over internet because of security concerns Influence on the buying intentions and adoption stages; there was no systematic interpretation about how the first time buyer was likely to continue with buying online or would like to intensify or pull more of existent products available offline.

Vijaya sarathy & Jones (2000) found that perceived risk influenced both attitudes toward online shopping and intention to shop online in line with other studies. However, perceived risk is said to decrease with internet experience.

### 3. RESEARCH GAP

Customer happiness has emerged as a significant differentiator in both online and offline buying. Customers' satisfaction assesses how pleased customers are with each product, its quality, and the whole experience. It shows whether or not the customer is satisfied with the business. It is also an important factor in determining a company's success. Thus, the lesson for retailers is that consumer expectations are continuously rising, and only satisfied consumers would be more loyal in the long run. Various service sectors have researched throughout the years to evaluate the reasons for customer satisfaction and loyalty for a certain quality of service aspects. However, in India, online shopping is quickly becoming the top and next growing industry. For the time being, online shopping is in jeopardy. They face stiff competition from other formats and must provide further innovations to satisfy and retain customers. Thus, in the present market scenario, consumers are the primary drivers of company viability. Customer happiness is important in the buying habit; if customers are pleased with their purchase, they will continue to buy more and more. In terms of previous

research studies, most of them focused on customers' offline and online buying habits. In recent years, most e-commerce sites have increased their deals and discounts to attract consumers and meet their wants and requirements, even though customers are more interested in purchasing offline to meet their demands. There was very scant research on customer satisfaction concerning Online and Offline shopping of Mobile phones. Hence, this research study will fill this gap and investigate consumer satisfaction about online and offline mobile phone purchasing in Telanagna.

### 4. OBJECTIVES

*The particular objectives of the examination are as per the following.*

- To study the socio-demographic status of the consumer of online and offline shopping.
- To explore the factors those affect the decision of customers to buy mobile phones online and offline.

### 5. HYPOTHESES

*To achieve the previously mentioned objectives, the accompanying speculation has been built up in the investigation.*

- **H01:** There is no significant difference between the factors affecting mobile phones' purchase decisions concerning online and offline shopping.

### 6. RESEARCH METHODOLOGY

- **Research Design:** Descriptive research
- **Sources of data:** Primary source of data is collected from the respondents through structured questionnaire and it was in order to collect data on Factors influencing on customers decisions to purchases online and offline shopping of mobile phones. Secondary data is collected from various Journals, Periodicals such as Magazines, Business newspapers, and from subject related books and websites.
- **Data collections methods:** Data has been collected using structure questionnaire through customer survey method and personal interview of Factors influencing on customers decisions to purchases online and offline shopping of mobile phones.
- **Sampling area:** Hyderabad and Secunderabad cities of Telanagna
- **Sampling Method:** Convenience and snowball sampling method has been used to collect sample of 600 respondents.
- **Statistical tools used:** ANOVAs and t-test using by SPSS 21.0.



## 7. RESULTS AND DISCUSSIONS

| <b>Cronbach's Alpha</b> | Cronbach's Alpha Based on Standardized Items | N of Items |
|-------------------------|----------------------------------------------|------------|
| 0.855                   | 0.887                                        | 20         |

From the Table 1, it shown that the questionnaire is tested for its reliability and presented the results here under. The questionnaire developed is pretested and validated through face validity as it was sent to a carefully selected sample of experts and it also has a sufficiently good reliability score. The result given

the value of the as **0.855**; It indicates that, the data has a high reliability and validity.

**Summary Item Statistics:** It is evident that the summary of the means, variances, covariance and inter-item correlations are presented in the following table.

|                         | Mean  | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|-------------------------|-------|---------|---------|-------|-------------------|----------|------------|
| Item Means              | 3.468 | 2.586   | 4.515   | 2.421 | 2.108             | 0.275    | 20         |
| Item Variances          | 0.43  | 0.184   | 1.599   | 1.419 | 16.324            | 0.098    | 20         |
| Inter-Item Covariance's | 0.025 | -0.443  | 0.621   | 1.152 | -1.121            | 0.021    | 20         |
| Inter-Item Correlations | 0.057 | -0.532  | 0.682   | 1.41  | -1.064            | 0.051    | 20         |

Source: Primary data

It is obvious the minimum and maximum mean, Range, and variance values for item means, item variances are positive. Maximum mean is witnessed for Item means is 4.515. Maximum variance is 1.599, maximum inter item covariance is

witnessed is 0.621 and maximum inter-item covariance is found to be 0.682.

**Demographic Variables:** The frequency distribution of demographic variables is presented in the following table.

| <b>Particulars</b> | <b>Classification</b> | <b>No of Responses</b> | <b>Percentage</b> |
|--------------------|-----------------------|------------------------|-------------------|
| <b>Age</b>         | Below 20 years        | 134                    | 22.3              |
|                    | 21-30                 | 166                    | 27.7              |
|                    | 31-40                 | 163                    | 27.2              |
|                    | 41-50                 | 102                    | 17.0              |
|                    | 51 and above          | 35                     | 5.8               |
| <b>Gender</b>      | male                  | 420                    | 70.0              |
|                    | female                | 180                    | 30.0              |
| <b>Education</b>   | SSC                   | 48                     | 8.0               |
|                    | intermediate          | 73                     | 12.2              |
|                    | Degree                | 174                    | 29.0              |
|                    | Post Graduation       | 202                    | 33.7              |
|                    | Above Post Graduation | 103                    | 17.2              |
| <b>Occupation</b>  | Govt employee         | 184                    | 30.7              |
|                    | Private employee      | 216                    | 36.0              |
|                    | Business              | 70                     | 11.7              |



|                                   |                  |            |             |
|-----------------------------------|------------------|------------|-------------|
|                                   | Home maker       | 62         | 10.3        |
|                                   | Student          | 68         | 11.3        |
| <b>Monthly income (in rupees)</b> | below 25,000     | 52         | 8.7         |
|                                   | 25,001 - 35,000  | 90         | 15.0        |
|                                   | 35,001- 45,000   | 241        | 40.2        |
|                                   | 45,001 - 55,000  | 149        | 24.8        |
|                                   | 55,001 and above | 68         | 11.3        |
| <b>Total</b>                      |                  | <b>600</b> | <b>100%</b> |

Source: Primary data

The descriptive analysis of all the demographical variables is shown in Table 3, it is found that 27.7 percent of the respondents aged between 21-30 years, 27.2 percent of the respondents aged between 31-40 years, 22.3 percent of the respondents aged below 20 years, 17 percent of the respondents aged between 41-50 years and 5.8 percent of the respondents aged 51 years and above. Similarly, 70 percent of the respondents were male respondents and remaining 30 percent of the respondents were female. 33.7 respondents belong to Post Graduation. Followed by, 29 percent of the respondents belong to Degree, 17.2 percent of the respondents belong to Above Post Graduation, 12.2 percent of the respondents belong to intermediate and 8 percent of the respondents belong to SSC. 36 percent of them were private employees. Followed by 30.7 percent of them were govt. Employees, 11.7 percent of them were business people, 11.3 percent of them were students and 10.3 of them were Home maker. 40.2 percent of the respondents earn monthly income level is 35,001- 45,000 rupees. Followed by 24.8 percent of them earn 45,001 - 55,000 rupees, 15.0 percent of them earn 25,001 - 35,000 rupees, 8.7

percent of them earn below 25,000 rupees and 11.3 of them earn 55,001 and above rupees for monthly.

**7.1 ANOVA:** The ANOVA is used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups. So it is conducted in order to understand whether there is any significant difference in opinions of respondents on factors that affect a customer's decision to buy Mobile phones online the results are presented in the following table.

**ANOVA for Factors that affect a customer's decision to buy Mobile phones online:** In order to identify the mean difference between groups, for that Analysis of variance statistics is conducted between customer decision to buy mobile phones online, for that research has considered factors such as Discounts & offers, Product quality, Convenience of the product, Company reputation, Product variety, Customer service, Easy and free availability of the product and Product Performance, and the respondent's level of agreements describe in respected tables.

|                            |                | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b> |
|----------------------------|----------------|-----------------------|-----------|--------------------|----------|-------------|
| Discounts & offers         | Between Groups | 50.575                | 4         | 12.644             | 22.027   | .000        |
|                            | Within Groups  | 341.543               | 595       | .574               |          |             |
|                            | Total          | 392.118               | 599       |                    |          |             |
| Product quality            | Between Groups | 6.157                 | 4         | 1.539              | 1.469    | .010        |
|                            | Within Groups  | 623.561               | 595       | 1.048              |          |             |
|                            | Total          | 629.718               | 599       |                    |          |             |
| Convenience of the product | Between Groups | 3.527                 | 4         | .882               | .644     | .031        |
|                            | Within Groups  | 814.866               | 595       | 1.370              |          |             |
|                            | Total          | 818.393               | 599       |                    |          |             |
| Company reputation         | Between Groups | 3.413                 | 4         | .853               | .706     | .588        |
|                            | Within Groups  | 719.305               | 595       | 1.209              |          |             |
|                            | Total          | 722.718               | 599       |                    |          |             |
| Product variety            | Between Groups | .410                  | 4         | .103               | .084     | .007        |
|                            | Within Groups  | 729.188               | 595       | 1.226              |          |             |
|                            | Total          | 729.598               | 599       |                    |          |             |



|                                           |                |         |     |       |       |      |
|-------------------------------------------|----------------|---------|-----|-------|-------|------|
| Customer service                          | Between Groups | 9.030   | 4   | 2.257 | 1.531 | .192 |
|                                           | Within Groups  | 877.530 | 595 | 1.475 |       |      |
|                                           | Total          | 886.560 | 599 |       |       |      |
| Easy and free availability of the product | Between Groups | 5.410   | 4   | 1.352 | .889  | .040 |
|                                           | Within Groups  | 905.548 | 595 | 1.522 |       |      |
|                                           | Total          | 910.958 | 599 |       |       |      |
| Product Performance                       | Between Groups | 4.951   | 4   | 1.238 | .931  | .045 |
|                                           | Within Groups  | 790.722 | 595 | 1.329 |       |      |
|                                           | Total          | 795.673 | 599 |       |       |      |

Table shows the performance of the ANOVA study on customer's decision to buy Mobile phones online. Concerning Discounts & offers, 50.575 is the between-group variation and 341.543 is the within-group variation. It also reveals that F-distribution 22.027. Followed by, the level of significance is .000, which is less than 0.05. Regards product quality, the between-group variance is 6.157, and the within-group variation is 623.561. It also shows that the F-distribution is 1.469. The level of significance is 0.000, which is less than 0.05. Convenience of the product, the between-group variance is 3.527, and the within-group variation is 814.866. It also shows that the F-distribution is .644. The level of significance is 0.000, which is less than 0.05. Company reputation, the between-group variance is 3.413, and the within-group variation is 3.413. It also shows that the F-distribution is .706. The level of significance is 0.588, which is more than 0.05 ( $p > .005$ ). Product variety, the between-group variance is .410, and the within-group variation is 729.188. It also shows that the F-distribution is .084. The level of significance is 0.007, which is less than 0.05 ( $p < .005$ ). Customer service, the between-group variance is 9.030, and the within-group variation is 877.530. It also shows that the F-distribution is 1.531. The level of significance is 0.192, which is more than 0.05 ( $p > .005$ ). Easy and

free availability of the product, the between-group variance is 5.410, and the within-group variation is 905.548. It also shows that the F-distribution is .889. The level of significance is 0.040, which is less than 0.05 ( $p < .005$ ). Product Performance, the between-group variance is 4.951, and the within-group variation is 790.722. It also shows that the F-distribution is .931. The level of significance is 0.045, which is less than 0.05 ( $p < .005$ ). Therefore, Discounts & offers, Product quality, Convenience of the product, Product variety, Easy and free availability of the product, and Product Performance factors statistically influence on the customer's decision to buy Mobile phones online, whereas company reputation and Customer service not significant.

**7.2 Independent t-test:** The mean values, Standard Deviation and Standard Error Means are calculated for the different dimensions of online and offline shopping factor like Discounts & offers, Product quality, Convenience of the product, Company reputation, Product variety, Customer service, Easy and free availability of the product and Product Performance of factors affecting mobile phones' purchase decisions concerning online and offline shopping are furnished in the following table.

**Table 5 Independent Samples Test results**

| Factors                                   | t     | Sig. |
|-------------------------------------------|-------|------|
| Discounts & offers                        | 2.922 | .026 |
| Product quality                           | .288  | .230 |
| Convenience of the product                | .386  | .020 |
| Product variety                           | -.962 | .211 |
| Customer service                          | 1.120 | .338 |
| Easy and free availability of the product | 1.171 | .047 |
| Product Performance                       | .668  | .149 |

The t-value (.288) was not statistically significant at 5 percent sig concerning the factor Product quality. Similarly, t-values of Product variety (-.962), Customer service (.338) and Product Performance (.149) were not statistically significant, these factors did not shown any changes among the online and offline mobile purchasing, At the same time, factors like Discounts & offers ( $t=2.922$ ;

$p < 0.05$ ), Convenience of the product ( $t=.386$ ;  $p < 0.05$ ) and Easy and free availability of the product ( $t= 1.171$ ;  $p < 0.05$ ) shows significance influence, these mean these factors had affecting mobile phones' purchase decisions concerning online and offline shopping.





## CONCLUSION

The purpose of this research is to investigate the variables that influence consumers' choices to acquire mobile phones both online and offline in the state of Telanagna. Using an easy and snowball sample strategy, primary data were acquired from respondents who had previous experience buying mobile phones both online and offline using the convenient and snowball sampling method. The researcher has gathered 600 samples from both online and offline consumers and is now evaluating the data using ANOVA and the t-test methods. According to the findings of the study, factors such as discounts and offers, product convenience, easy and free availability of the product, and product performance did not show a significant difference between online and offline purchases of mobile phones in Telanagna. Similarly, factors such as product quality, product variety, customer service, and product performance did show a significant difference between online and offline purchases of mobile phones in Telanagna, according to the findings of the study.

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# THE STUDY ON IMPACT OF THE SCHOOL DROPOUTS TO THEIR FAMILY AND TO THE SOCIETY WITH SPECIAL REFERENCE TO MODARA AND MATTAKKULIYA AREAS OF SRI LANKA

**Solangaarachchi T. G. K**

*Aquinas College of Higher Studies, Colombo -08, Sri Lanka*

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## ABSTRACT

*This sociological study is done based on Children who are considered to be the School Dropouts of Adolescents in Urban area of Colombo, Sri Lanka. These Children live under the care of their Parents, grandparents, and with other care givers. The school dropouts in the Urban area of Colombo are found to be the victims of a society which is corrupted strongly due to Socio-Economic factors. The main objective of this Research article is to look into the main causes for students to dropout halfway of their schooling. The primary and secondary data were collected by providing questionnaires, interviews, and observations using accepted data collecting methods. The collected data are presented using most suited methods to analyze data by charts, tables and descriptive methods. The Parents, Teachers and Key Informants are being questioned as to why the percentage of School dropouts in this area is high and vulnerable. In order to achieve this objective, the questionnaires have been used particularly with School Dropouts and with their Parents further conduct interviews with Teachers and Key-Informants.*

**KEYWORDS:** *Adolescent, Dropout, Impact, Family, Society.*

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## I. INTRODUCTION

Education fosters personal development and self-fulfillment. It encourages the individual to develop his mental, physical, emotional and spiritual talents to the full. Understandably, the word Education derives from the Latin word e-ducere, which means to lead out. In advance industrial societies Education is provided by the state as a matter of right for all its citizens. Formal institutions, schools, Colleges and universities are organized for this purpose. (M. Haralambos with R. M. Heald, 2011, P.172). The technical understanding in other words is to transmit the stored knowledge, values and skill from one generation to another. The Global publication of human rights and the act of child rights state that the education is a universal human need. This is also a very powerful human right including freedom and democracy. They are staffed by fulltime professional practitioners, Teachers and Lecturers. Attendance at schools is compulsory; it is upheld by legal sanctions. Education is provided free of charge, though ultimately it is paid for by the tax payer. Although free compulsory state Education is largely taken for granted today and regarded as a perfectly normal and natural state of affairs, it is important to remember that it is a very recent development in the history of man.

The word education has a complex meaning in a broader sense. Further, Education is always on the development process with new adoptions in any country. (Reddy, 1979). Education for human beings and animals has a different meaning. That means, the human beings could be educated always while animals are being trained. French sociologist Emile Durkheim saw the major function of education as the transmission of Society's norms and values. He maintained that "Society can survive only if there exists among its members a sufficient degree of homogeneity; education perpetuates and reinforces this homogeneity by fixing in the child from the beginning the essential similarities which collective life demands". Durkheim argues that in complex industrial societies, the school serves a function which cannot be provided either by the family or peer groups. Further he says that Education teaches the individual specific skills necessary for his future occupation. (M. Haralambos with R. M. Heald, 2011, p. 175).

According to the "Sustainable Development" introduced in Brunt Land Report – 1972 of United Nations and Millennium development goals suggested to start in 2000 up to the end of 2015 and its annexure, the younger generation should be provided with a meritocratic education because many issues faced by the present society can be solved through it. Researches done by many of the recognized international organizations



including UNESCO, state that most of the children who are in the schooling age, have not received their primary Education. Education is the basic foundation of a person's life. Therefore, not providing proper education causes to bring bad results to children as well as to the whole society where they live. American sociologist Talcott Parsons argues that after primary socialization within the family, the school takes over as the focal socialization agency. School acts as a bridge between the family and society as a whole, preparing the child for his adult role. Parsons sees the Educational system as an important mechanism for the selection of individuals for their future role in society.

According to the UNESCO report in 2016, 52% of the world population is urban population (8 billion). One billion of the world population belongs to the urban community who receive low income according to the same report and they live in slums. This slum population has a very low economy and their poverty has become their culture. Therefore, this community is the source of many social issues that are directly affected to the co-existence and the development of the human society. socialist states that many deviant and delinquent behaviors such as prostitution, suicides, drug addiction, begging as a profession, underworld criminality, family problems, child abuse etc. have been created by its community.

Use of alcohol and other drugs among school children is a current global problem giving rise to many health hazards, psychosocial problems and reduced school performances, both in academic work and in sports. These problems are also seen in Sri Lanka and very few studies have been done to estimate their prevalence. Furthermore, no not worthy actions have been taken to improve this situation. (National Dangerous drugs control Board, RESEARCH MONOGRAPH, 2006, p. 146).

In the first place, need to discuss the vast amount of resources provided on Education. The highlighted fact is that in Sri Lanka, it is free Education and not only that even government provides free provision of textbooks, uniforms and mid-day meals. It records that the literacy rate of Sri Lanka stands as 92% for adults and 97% for youths. (Perera, 2012). This is a major drawback in schools located specially in the urban areas of Colombo. Thus, the literal meaning of School dropouts can be noted as "A student who leaves the school before completing the education for any reason other than death or without transferring to another school". (Perera, 2012).

It has been revealed that the highest numbers of school dropouts are from low-income families in urban areas and them quitting education halfway through has a disastrous effect on society. (Ministry of Education, 2017). Even among them, school dropout is frequent among adolescent children (11-18 years of age).

## II. OBJECTIVES

The main objective of this article is to analyze the impact of the School Dropouts to their Family and to the Society with special reference to Modara and Mattakkuliya areas of Sri Lanka. The specific objectives have carefully formulated in order to achieve the main objective while investigating the Socio-economic factors affecting for the school dropouts, to identify the factors and the agencies that creates the reasons for school dropouts and to identify the attitudes about the Continuous Education.

## III. METHODOLOGY

Research refers to a search for new knowledge. It is a scientific and systematic search for pertinent information on a specific topic. To Redman and Mory, "Research is a systematized effort to gain new knowledge". (Sminatharatnam and Chandra, 2004). Methods are methods of data gathering and interpretation, whereas methodology is concerned with the theoretical assumptions about methods. (Uyangoda, 2011). This research followed a mixed method design including both qualitative and quantitative research designs. Quantitative research analysis will be utilized to gather ground data of the school dropouts where qualitative research design will be employed to follow the narratives of the other entities related to the subject. The quantitative research design will allow the researcher to understand the family structure, economic structure and their societal relationship towards the community through their relationship among various community organizations of their social setting. Qualitative research design permitted the researcher to identify the unique stories of each and every school dropout regarding the real-life situations that they live.

The School dropouts and their families in Modara and Mattakkuliya of Sri Lanka are taken as the study population of the study. There are 50 families with students who do not attend schools and they are considered as school dropouts. (Field Survey, 2021). It will be non-random methods in selecting the sample of the study. Particularly 5 "Gramasevaka Areas" (GS) will be monitored. It is observed that Modara has 3 "Gmasevaka Areas" while Mattakkuliya has 2 "Gramasevaka Areas". The key informants (K) such as School Teachers (T), Principals (SP), and Gramasevakas (Headman of the Village) will be selected purposively.

The researcher employed a structured questionnaire which will be followed by interview. The first interview will be done with children (S) and second interview will be with their parents (P) and Guardians.



Thirdly, the Teachers (T) will be interviewed and the key-informants (K) as well. The questions of the questionnaire were ninety percent designed with close ended questions whereas researcher will interview each and every dropout selected from purposive sample in filling the answers to all the questions.

#### IV. MAJOR FINDINGS AND DISCUSSION

According to Functionalism, the society is studied as a system, that is as a set of interconnected parts which together form a whole. The basic unit of analysis is society and its various parts are understood primarily in terms of their relationship to the whole. The early functionalists often drew an analogy between society and an organism such as the human body. They argued that an understanding of any organ in the body, such as the heart or lungs, involves an understanding of its relationship to other organs and in particular, of its contribution towards the maintenance of the organism. In the same way, an understanding of any part of society requires an analysis of its relationship to other parts and most importantly, of its contribution to the maintenance of society. In order for these essential services to be maintained, individuals must be sufficiently motivated to perform their roles. If they were totally apathetic, the social system would collapse through lack of effort. These socio-economic variables are an ideal descriptive cross-cutting which illustrate the realistic and profound circumstances of students who are living in a specific area. This phenomenon is studied under the topic of **“School Dropouts of Adolescents in the Urban Area of Colombo, Sri Lanka and possible Strategies towards Continuous Education”** and for this Colombo Divisional Secretariat of Sri Lanka is selected because in which it is visible that in the urban areas which exists the large number of school dropouts.

**Table 01: Number of Sample selected for the study**

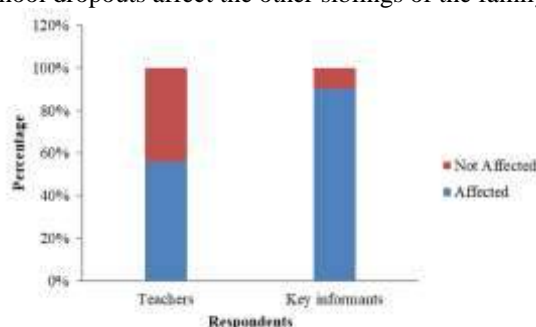
| Police Division | GS Division   | Sample Size |         |          |                |
|-----------------|---------------|-------------|---------|----------|----------------|
|                 |               | Students    | Parents | Teachers | Key Informants |
| Modara          | Modara        | 10          | 5       | 5        | 2              |
|                 | Aluth Mawathe | 10          | 5       | 5        | 2              |
|                 | Lunu Pokuna   | 10          | 5       | 5        | 2              |
| Mattakkuliya    | Mattakkuliya  | 10          | 5       | 5        | 2              |
|                 | Samithpura    | 10          | 5       | 5        | 2              |
| Total           |               | 110         |         |          |                |

In aiming and focusing the objectives of the study, five GS divisions namely Modara, Aluth Mawatha, Lunu Pokuna, Mattakkuliya and Samithpura in Colombo Divisional Secretariat division of Sri Lanka were selected. During the background analysis the researcher observed that the urban area of Colombo recorded the highest number of school dropouts (Perera, 2012).

### 1. IMPACT TO THE FAMILY

#### 1.2 Teachers Perspective.

Here the researcher focuses his attention on the impact of the school dropouts to the family and to the society. First of all, the attention is drawn to discuss as to how school dropouts affected the family. The teachers, (56%) states that school dropouts affect the other siblings of the family while (44%) state no. The key informants (90%) states that school dropouts affect the other siblings of the family while (10%) state no.



**Figure 01: Effect of the school dropouts to the other siblings**

Source: Field Survey Data, 2021



It is observed that school drop outs in this area is uncontrollable and these children are at times not obedient to their Parents. Therefore, the key informants highlight that they join different groups available in their vicinity. Most of the time children see swords, knives, drugs, violence, and hear filthy words etc...

“Apart from few the majority is out of the control of their parents and it contains a wicked, tough, and aggressive life situation”. K/02

The culture of this area has to be changed; there are very famous three underworld groups exist, such as “Samithpura, Vella, Blue Mandole” and popular figures have come out from these three units. Thus, children come from these cultures and therefore, drugs, murder, kidnaps etc...are very common for children. T/19

Source: Field Survey Data, 2021

The researcher convinces himself, which means these children do not have a strong connection with the family although they live in the family. These children create aims and targets in life and this is due to the geographical area that they live. This would understand better with the following testimony by one of the Teachers.

“The connection with the family is less. Most of the boy’s aim is to buy a three-wheeler anyhow. And girl always try to get married to a taxi driver and this act has been a big show in this context. For boys also, it is a giant work if they could buy a three-wheeler and then to hang around wearing a big neckless around the neck”. T/02

Source: Field Survey Data, 2021

The Teachers note that this area is famous for drugs and at least one in the family deals with drugs or uses drugs. In many occasions, time to time at least one or both live in prisons. Thus, children from these families naturally drop out of school and not only that these children openly say that their Parents are in Prison.

“In these areas where children live are very famous for drugs and there is at least one in the family who uses drugs who deals with drugs. Therefore, you find at least one or both in the Prison or else at least once they are caught dealing with drugs. Thus, children from these families drop out of school easily since they don’t have boost from the parents to continue schooling”. T/18

Source: Field Survey Data, 2021

The children are not continuous for the education and the reason is once the child receives an opportunity to earn something on a particular day, then the child stays at home and engage in doing the work for money.

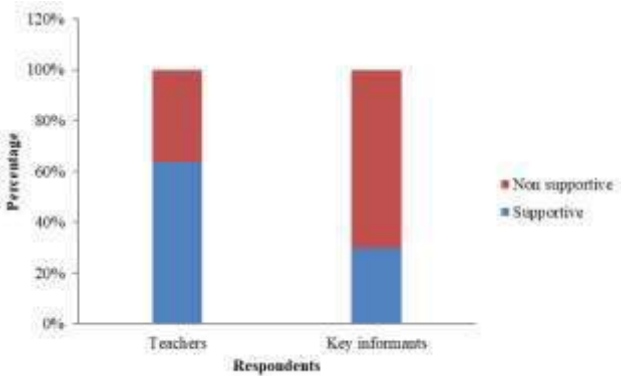
“When it is questioned; the younger child used to say that his Brother is not coming to school these days because he is engaged in a little work to earn something”. T/02

Source: Field Survey Data, 2021

The next factor that the researcher identifies is that there are families who move from place to place seeking jobs. This causes children lack of protection at home and children move out of the house and without their knowledge, they are thrown into unnecessary activities.

“Parents move place to place in search of jobs and thus Children do not have protection at home. Thus, children get out of house and get involved in many other activities”. T/10

Source: Field Survey Data, 2021



**Figure 02: Issues in the Government Education System**  
Source: Field Survey Data, 2021

According to teachers (64%) say that these children help the parents in their home affairs but this evaluation different when it comes to the key informants. (70%) of key informants express that these children do not support the parents.

The researcher also come across the Parents who are genuinely concern about their children. There are Parents who even try to join the child for vocational training if he or she is not schooling.

“There are Parents who actually concern about their children. Even child does not go to school they try to bring the child to another vocational training institute thinking that their child would be abused being at home”. T/11

Source: Field Survey Data, 2021

There are also Parents who are fed up of encouraging their child to continue schooling. At times these Parents reprimand the child but parents have not been successful in their attempt. This fact is discovered by school teachers, in this area.

“There are Parents who say that there is no any strong connection with the family. What they say is; ‘useless of reprimanding the child Teacher he doesn’t listen to me’”. T/09

Source: Field Survey Data, 2021

There are also school dropouts who genuinely confess and wish their own brother and sisters’ good education because they do not want to see their brother or the sister getting into the same problem.

“There many children who say that their Brother or Sister should not be fallen into the same well that I have fallen. So, they wish something better for their own Brother or Sister”. T/14

Source: Field Survey Data, 2021

There is a pathetic fact that came out from the Interviews of school teachers that many a time when there is a school dropout at home the other siblings try to go the way that his or her brother or sister has gone.

“Yes, the way the elder brother or the Sister goes will be definitely followed by the younger brother or by the younger Sister in the Family”. T/05

Source: Field Survey Data, 2021

Understandably, one excited fact that reveals is, there are families the Mother has a baby and at the same time her own Mother too has a baby living together at one house. This is a vulnerable situation that finds in this study area.

“There are families where we find children from mother and from her own Mother as well living together”. T/17

Source: Field Survey Data, 2021



The ignorance of the Parents on sexual life and the weight of the family, they fall into difficulties and accordingly children also fall into the same difficulty since they do not have a proper guidance at home and area around they live.

“Most of the time the ignorance of the Parents has caused the children to drop out of school”. T/04

Source: Field Survey Data, 2021

Therefore, the researcher understands that most of the time the children take their parents as example and role model in their rest of the life. These people do not know that there is a life out of their territory.

“What Parents do and what they have done in life will be followed by their children and definitely they would also do the same one day”. T/01

Source: Field Survey Data, 2021

### 1.2 Parents Perspective.

It is very essential to evaluate the perspectives from Parents in this regard. The Parents confess that the school dropouts used to spend the time just lying at home and Parents could be happy at least if they do something to earn something.

“Child spends the time at home and does not do any job. This child anyhow did not go to any school”. P/01

Source: Field Survey Data, 2021

The researcher finds that parents brings up few concerns about the schools of their children that have been attending. The complaint is the lack of pleasant environment in schools. The second fact that is highlighted is the discipline of children.

“School is not good and there is no any conducive learning experience for children to learn. Saddest point is there is no any discipline in the lives of children schooling there”. P/02

Source: Field Survey Data, 2021

The researcher finds an Institute called “Samata Sarana” at Mattakkuliya, built basically for the poor children in the urban area of Colombo. The service is enormous and commendable because this institute teaches the children till Grade 05 and the institute produces the basic needs during their school. Once the students complete Grade 05, these children are admitted to the other schools around. During the time at this institute, these children are properly looked after and these children are given love and concern which sometime children do not experience in their own homes.

The tragic factor that causes is, once these children are admitted to Grade 06 in other schools, children find it difficult to cope up with the situations at the new school. Most of the time, these children are not welcomed by the students and Teachers in these schools. Then the confusions start between children and Teachers and these confusions have led the students to dropout of schools.

“My child studied at Samata Sarana, Mattakkuliya up to Grade 05 and then child had to move to another school. There Teachers were not helpful to the child and gradually stopped schooling”. P/03

Source: Field Survey Data, 2021

The researcher finds few administrative failures in some of the schools that their children joined after the primary education at a different place and these highlighted facts could be analyzed for further action and review. One such problem that is visible is the lack of discipline.

“The school is not good and the students in the school do not have disciplines”. P/08

Source: Field Survey Data, 2021

In some of the schools there is no protection specially for girl students and majority of parents send the students specially girls because they know their daughter is safe at school.



“My child moved to a school when reaching Grade 03 and this school is not good. There is no protection for students in the school”. P/10

Source: Field Survey Data, 2021

The other fact is days’ time table does not function well and Parents comment that students go to school to spend the time at Grounds.

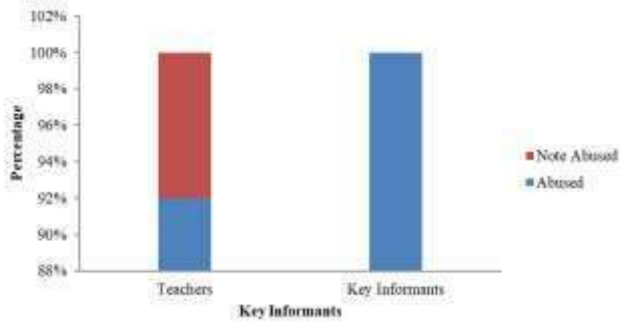
“There was no any proper education at school. Child spent the time playing and dancing at school”. P/21

Source: Field Survey Data, 2021

**2. IMPACT TO THE SOCIETY.**

**2.1 Teachers Perspective.**

Many researchers assume that society has to be well organized and be well balanced. Otherwise, there can be problems in the function of the society. Likewise, if society does not function well there is always problems and difficulties for its members. Therefore, if any entity in the society does not function well, that would affect the smooth functioning of the whole system of the society.



**Figure 03: Issues in the Government Education System**

Source: Field Survey Data, 2021

The considerable proportion of Teachers (92%) state that these school dropouts are being abused and not only the Teachers but the Key informants (100%) approve the same opinion of the Teachers.

It is displeasing to hear that children are being abused due to lack of sex education in this area. The most vulnerable fact is that daughter is abused by his own Father and this is one of the experiences of a school teacher in this area.

“There had been issues because children are ignorant and specially on sex education. Specially, girls have been abused by their own Father”. T/01

Source: Field Survey Data, 2021

It is not only with the Father even there has been issues with relations too. As a reason for this, the teachers highlight that these people live together. Sometime in these houses two three families live together and aunties, uncles, brothers and sisters of Parents and Grand Parents live together. Therefore, in a situation of this nature, there is a massive chance for children to be abused by their own relations.

“There was a student in grade 09 and this girl ran away with her Uncle. Other than this there has not been any incident reported so far”. T/02

Source: Field Survey Data, 2021

According to a Teacher, these children what they seek most is the love, concern, attention and protection. Evidently, these children search these concerns from outside people since they do not receive them at home from their Parents. The researcher finds this fact as a danger.





“There is no any abuse as such; but these students need attention, care, love and protection. So, these children may have fallen into such difficulties while searching the above-mentioned attention, care, love and protection”. T/05

Source: Field Survey Data, 2021

The example for the above fact is the following testimony by one of the Teachers. A girl looked for protection and love from someone and finally ended up the life with the “Mesan Bass” who came to the school to some constructions.

“Specially, girls when they reach Grade 10 they try to get out of the house. What they seek is Love, Protection and care and there was a case whom I know, this girl ran away with the Mesan Bass who came to do some construction at school”. T/10

Source: Field Survey Data, 2021

The following dialogue will excite the reader, because one can question that in actual sense these things could take place in the urban area of Colombo. The interview with the Key informants clarified this with his experience working in this area. This act is very inappropriate and unethical but society is corrupted to this level.

“There are incidents that Father sleeps with his daughter and also there are incidents that Brother and uncle sleep with his own sister”. K/03

Source: Field Survey Data, 2021

The researcher understands through these evaluations that mostly the girl students face this abuse issues but for Boys the existing problem is the addictions for drugs. Thus, it is two distinct entities which lead the students to one pathetic situation in their life.

“I know female children have faced these abuse issues and boys they get addicted to drugs because they have everything freely available at home”. T/11

Source: Field Survey Data, 2021

One pathetic observation is that there are children knowing that they are abused, still they come to school. The Teachers confess that this type of children terminate their schooling soon.

“There are children who come to school even while having abuse cases and child clearly knows that he/she is abused”. T/09

Source: Field Survey Data, 2021

This above fact is considered to be very vulnerable because by having known the life is spoiled and disturbed, still the child comes to the school since there is no any other option. Most of the time, it identifies that child has been very innocent. This innocence of the child is spoiled by the malpractices of the society.

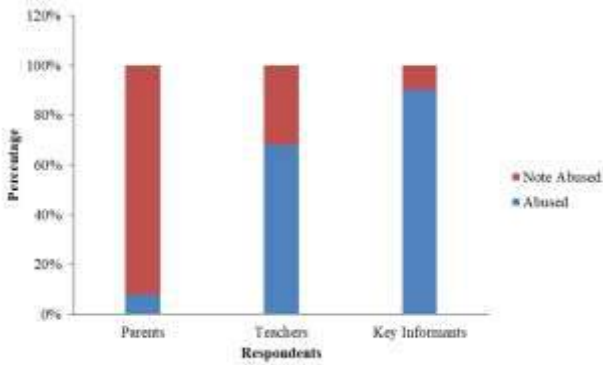
The researcher identifies that due to legal family issues in the family, many children have faced difficulties at schools. The following testimony would prove this fact.

You must identify the real problem as to why children are not coming to school. Eg; There are children who do not have Birth certificates, Parents do not have Identity Cards, no marriage certificate and sometime child does not know who his or her Mother and Father. T/16

Source: Field Survey Data, 2021

## 2.2 Parents Perspective.

The parents in this area express a unique concern to the question “whether their children are abused”. Major proportion (92%) of parents explain that their children are ‘Not’ abused. This answer is bit questionable because when it comes to Teachers and Key informants, they express themselves with solid examples and experience to say “Yes”. Even though, the experience and explanation from Parents positive regarding the above question, the interview with students direct the researcher to draw a picture that the society in which these children live is questionable the according to the explanation by students ascertain that there are abuses in and around.



**Figure 04: Whether these Children are Abused**

Source: Field Survey Data, 2021

“This society and the environment are not good. We don’t find anything good in the society rather than bad around us”. S/01

Source: Field Survey Data, 2021

It is discovered that society is bad and more than that the students confirm it as cruel. The students note this fact because what they see and experience daily is not that pleasant. There are people made personalities in this society and these personalities are much strong in the society since they act with a lot of power.

“This society is bad and very cruel and we have to be very careful in living in this place”. S/06

Source: Field Survey Data, 2021

This society is cruel to the extent that children experience robberies at their own house. This is due to the strong poverty existing in the society and in the earlier paragraphs, it was mentioned that in every family there is at least one in the family who is addicted to drugs. Therefore, people of this nature need money anyhow and when they do not have money in their hands, they steal things from the own house and sell, to use drugs. This is mainly done by the Father of the family.

“I am at a good place but this society is very bad and even the environment at my house is very bad because my Dad rob things from home for money”. S/20

Source: Field Survey Data, 2021

The drug is something very common in this area and life connected to drugs bring short terms pleasure and students have become the victims of this disaster prevailing in this society.

“Around this area, the drugs are freely available and I don’t hear any good word from around. To this extend the society is spoiled and corrupted”. S/24

“There are many houses together and one is connected to the other. Almost every house is differentiated by single wall and its very noisy all the time. Most of the people fight and I find it very difficult to concentrate on one thing”. S/26

Source: Field Survey Data, 2021

Therefore, it is natural that when there is no one in the family, specially the parents are away from the attention of the children, children become wanders in the society. Their day is spent loitering in and around without involving with anything profitable for them and for the society.

“There are many children just loitering around and if there is anyone to help them with necessary requirements, they would definitely continue their schooling”. S/27

Source: Field Survey Data, 2021

Therefore, religious institutions in this area should play a major role in and around the life of these families and children. There should be an external force to control this society and its activities.



I suggest that Religious institutions in this area have got to do a major part in bringing these children on the track. The children must be taught both practical and spiritual things at our Daham Pasals. The Teachers teach at schools not from the area their capable but they are given a different stream to handle, which should not be. The culture of this area has to be changed; there are very famous three under world groups exist such as “Samithpura, Vella, Blue Mandole” and popular figures have come out from these three units. Thus, children come from these cultures and therefore, drugs, murder, kidnaps etc...are very common for children. T/19

Source: Field Survey Data, 2021

The very reason is Parents are separated and children are left alone with Grand Parents. This separation may be very common in this society but these Parents do not know how this is affected psychologically to the children of divorced parents.

“My father left me and I live with my Grand Father. The people around, help us and they are so good. My Father sends some money because Police have reprimanded him to pay the maintenance fee to the house”. S/28

Source: Field Survey Data, 2021

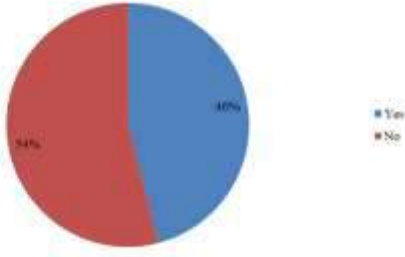


Figure 05: Desire to Change this Society

Source: Field Survey Data, 2021

The considerable proportion (46%) of school dropouts express strongly that they would change this society if they have a power. Which means these children undergo struggles in their lives and live their lives with bitter experience. The emotional statements the students make in this regard, is very important.

“Yes, I will definitely change this society for that I need to join the Police”. S/13

Source: Field Survey Data, 2021

Majority of school drop outs consider poverty as barrier for them to stand straight in the society and further reflect that poverty has made these children powerless in this place where they live.

“If I have money, definitely I help the poor in this area where I live. The poverty is a major problem in my area”. S/14

Source: Field Survey Data, 2021

Considerable portion of children are well aware of the destruction that brings to their families through drugs and through other calamities. This brings to the knowledge of the researcher that innocent children too have become the victims of this tragic conflict in this society.

“Yes, definitely I am going to chase these drug addicts, robbers and others who sexually abuse girls in this area”. S/32

Source: Field Survey Data, 2021

The other highlighted fact is, according to students, the injustice prevailing in this society. In other words, the people who bear famous names in this society are dominant characters.



“I will definitely stand for the injustice of the society and I want to rescue the children who are addicted to drugs, here in this area”. S/49

Source: Field Survey Data, 2021

There are school dropouts who consider school life as important even though they have terminated themselves from the school. Considerably, with the movement of the time school drop outs begin to understand how important is, school life.

“If I have power, I will not allow the children to terminate their schooling because time of school is very important for any child”. S/15

Source: Field Survey Data, 2021

At the same time (56%) of school dropouts say that they do not want to change this society because they are happy about their life system.

“I am at home now. During my time at Madrsa School, I had to wake up at 4.00am therefore, the time I spend here is good”. S/19

“This society is good and friendly because they help us when necessary”. S/22

Source: Field Survey Data, 2021

### **3. THE KEY IMPACT TO THE FAMILY AND TO THE SOCIETY.**

One risk fact is, this school dropout has affected the other siblings of the family (56%). Young brother and sisters at home many a time look up to the elder ones and follow their life style. The key informants (90%) them confirm that school dropouts affect the other siblings of the family. It is discovered that school dropouts do not support the parents (70%).

The Teachers (92%) and the key informants (100%) note that school dropouts are abused in this society. The school dropouts are considerably settled in this area of living and they do not want to see this society changed (54%). It was discovered that there are underworld groups, robberies and violence prevail as something very common.

### **V. SUGGESTIONS**

There should be easy access to the teaching and learning process because with this existing system the children of this area finds it difficult to learn. Therefore, it is important to introduce a simple and understandable access to the teaching and learning process. The subject matters have to be simplified considering the IQ level of the children in this area. The administration of the existing government schools in the Urban area of Colombo should have accurate administration. The development of values in schools should be considered important and this should be included in the school curriculum in this area. The poverty level of the families in this area should be uplifted because without giving them food and basic needs one cannot expect a better society and a good family life in this area. The cooperation of the families with school teachers should be strong. The continuous counselling sessions for both Parents and children are very important. There should be a system to provide lunch for these students and there should be free and peaceful surrounding at schools. There should be scholarship programmes for these families.

### **VI. CONCLUSION**

It is discovered that there are family related factors and school related factors that cause students to dropout of school's half way of their lives. When it comes to family related factors, the researcher discovered the school admittance had not taken place on time, the attention of the parents in this regard had been very poor, the education of parents not satisfactory, most of the parents are self-employed, larger portion of parents are daily wagers, the family condition of parents has caused the children to dropout of school and parents are not interested on the education of their children.

When it comes to the school related factors, the researcher discovered that there had been favorite subjects and teachers for these students, children have been much interested on extra-curricular activities and friends. The teachers highlight addictions, food and nutrition as major reasons for children to terminate their school. The parents highlight the Government education system as one of the main reasons for their children to terminate their school.



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# STUDENT PERCEPTIONS ON ROLE OF EMOTIONAL INTELLIGENCE IN ACADEMIC ACHIEVEMENT: A PHENOMENOLOGICAL STUDY

**Arundhathi Chandran**

*Research Scholar, Tata Institute of social sciences, Mumbai*

## ABSTRACT

*Although there is an emerging body which described the relationship between Emotional Intelligence (EI) and academic achievement, there is no much study focused on to the in depth understanding of the student's perception on role of emotional intelligence on academic performance. The current study used the phenomenological approach for understanding the relevance of emotional intelligence for day-to-day activities, academic performance and how students deal with academic challenges with their emotional intelligence. 15 M.Phil. scholars who is studying in Mumbai were interviewed based on the purposive sampling selection. This research used exploratory research design to understand the role of emotional intelligence un academic achievements.*

*The findings shows that students with higher emotional intelligence are able to perform good academic performance. The components of emotional intelligence such as motivation, self- management, self- awareness, communication, decision making has influence on academic performance. And the present research found student habit and acceptance helps to improve emotional intelligence.*

**KEY WORDS:** *Emotional Intelligence, Academic Achievements, self- management, Self- awareness*

## 1. INTRODUCTION

In an earlier time, the success mantra mainly lies in intelligence quotient (IQ). Is IQ only enough for the success? Definitely, the answer is NO. Technical proficiency and general awareness alone not enough for the success of life (Lagrange, 2016). It is in this context the need of emotional intelligence plays an inevitable role among with the IQ. Controlling one's own emotions and interpersonal skills is needed for the success (Devi, 2016). Emotional intelligence has become a critical factor for human achievements, knowing ones 'self, rational decision making, understanding others, future success, and development (Bahar, 2016) (Fallahzadeh, 2011). Now a days, educational institutions are dealing with the challenges of diversity. They deal with people from different cultures for improving their education, quality and satisfying results. A dynamic students with different needs, aspiration, attitudes and styles needed for an educational institution to direct it in a fruitful manner that will enhance the competitive spirits. This efficiency is not simply determined by physical and intelligence quotients but it is mainly influenced by emotional intelligence.

Intelligence comes from two dimensions such as emotion and cognition (Checa&Berrocal, 2015). Earlier studies claimed that emotion doesn't have any role in intelligence (Humphrey, et.al, 2014). Now the

conventional wisdom found that emotion plays a major role in individual's intelligence. Oxford dictionary defined emotion as "any agitation or disturbance of mind, feeling, passion, and any excited mental state. Emotional intelligence is important to know one's own feelings and to know about others feelings and emotions. This will help human to act appropriately for the situations. Emotional intelligence (EI) is the ability to monitor one's own and other people's emotions, to discriminate between different emotions and label them appropriately, and to use emotional information as a guide to think and behave. The scope of emotional intelligence are managing emotional responses, understanding emotions and emotional meanings, appraising emotions from situations, using emotions for reasoning, and identifying emotions from faces, voices, postures, and other content Mayer, Roberts, Barsade (2007).

Recently the focus of research in the area of emotional intelligence are shifted from leadership and workplace outcome to its ability to predict performance and academic achievements. Nelson and Low (1999) posited that with more than 25 years of investigation they —have documented the importance and value of emotional and personal skills in high achievement, retention, career excellence, and responsive personal leadershipl (p. 21). There are many researchers which are



conducted to understand the relationship between emotional intelligence and students' academic achievements in different level of their education life. However, there is not much study conducted to understand the role of emotional intelligence within the perception of student. The current study focusing on the students lived experience in depth in this phenomenon, the student perspective on emotional intelligence on academic success. The research focusing on the students understanding about emotional intelligence on academic success, how student describe emotional intelligence in their day-to-day activities, how students use emotional intelligence for dealing with challenges in life.

The study followed phenomenological study to understand the lived experience of students to understand the influence of emotional intelligence on academic performance. The participant of the research study is MPhil students Mumbai. The participant of research is selected by using purposive sampling. For that researcher distributed Emotional intelligence scale developed by N.S schutte et.al in 1998. The questionnaire was distributed among 30 MPhil students. From that researcher did interview with students with high emotional intelligence. The proposed research conducted by one-on-one interview process by asking the question and recording the answer. A semi structured interview tool was used to conduct the interview.

The existing literature review argues that the domain of emotional intelligence plays a vital role in academic achievements as well as future success. Intelligence quotient with emotional intelligence only help for the future success. Also existing literature pointed out that students who are good in academics have more emotional intelligence than students who are not good in academics. It is said that students who are good in academics are able to concentrate on works and they can communicate with teachers with positive intention whereas students who scored less in academics have less social skills and they are not able to communicate with others because of low confidence.

This research focusing on emotional intelligence and academic success of highly scored students in both academics and emotional intelligence. The research is analysing their lived experience of emotional intelligence on academic success.

## 2. LITERATURE REVIEW

### 2.1 Emotional intelligence

The Oxford English dictionary, (1961) defines emotion as, "Any agitation or disturbance of mind, feelings, passion, and excited mental state." Mayer and Salovey, 1997 defined Emotional intelligence as "it is the ability to perceive emotions, to access and generate emotions so as to assist thought, to

understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth. (Crow and Crow,1964) convey that, "An emotion is an effective experience that accompanies generalized inner adjustment and mental and psychological stirred-up states in the individual and that shows itself in his overt behaviour". (Morris, 1979), defines emotion as, "A complex affective experience that involves diffuse physiological changes and can be expressed overtly in characteristic behaviour patterns." Emotional intelligence is the innate potential to feel, use, communicate, recognize, remember, describe, identify, learn from, manage, understand and explain emotions. – (Hein, 2007).

According to (Parmeshwaran & Beena, 1988), Emotional experience tends to show some characteristics. To a considerable extent, emotions are accompanied by the activation or an aroused state in the organism. They are normally accompanied by physiological changes in facial expressions, changes in physiological reactions like blood-pressure, heart beats, respiration etc., whenever an organism is experiencing an emotion, a lot of energy is released. This is true of many emotions. But there are also some emotions, like grief, where the energy and activity level is reduced. High level of emotional intelligence helps to feel healthy balance between good emotions and bad emotions. Emotional intelligence helps for motivation, focus, fulfilment, peace of mind, awareness, balance, self- control, freedom, desires and connection.

### 2.2 Students' perception on Academic performance

(Dean, 1998) Students' perception of success is depended up on class scheduling, teachers' approachability and instructors' performance. These components have important role for student success as well as lack of dedications and discipline. (Bahar, 2016) The major components which determine the success of students are teachers' quality, performance, and external environment, and student interest. The major component which helps for academic achievement or student interest towards studies is teachers' attitude towards students. ( Ferreira & Santoso, 2008) External environment plays vital role in academic achievements. (Wayne, Fortner, & Kitzes, 2013) Positively perceived environment is contributing to the academic success. ( Chevalier, Gibbons, Thorpe, Snell, & Hoskins, 2007) Students has misperception of they have bad skills to assess their performance level. This will affects students' academic achievements. ( Mitman & Lash, 1988) The class room environment is the most important element which is helping for academic success.



The existing literature pointed out that student's perception of academic success focusing on how teachers behaving in the classes and external environment. These two components otherwise call it as fear of the students. External environment such as people, culture plays an important role to give confidence to students. How the society is interacting with the students giving more positive and confidents to the students for their academics. Likewise, teachers' attitude is also matter more, teachers should give importance to all students. This will helps to get recognition among students and helps to improve student's personality. Personality have an effect on emotional intelligence.

The existing study talks about the components of emotional intelligence that is social skill (external environment), teacher's interaction, attitude, behaviour (communication), Student interest (self-motivation) for academic success.

### 2.3 Emotional intelligence and academic achievement

Historically, it was believed that successful cognition and emotions cannot work simultaneously. More specifically rational and logical thinking or decision making can't do with emotions (Humphrey, et.al, 2014). If emotions involving in rational decision-making individual are unable to take proper decisions. In contrast, the current studies are focusing on the role of emotional intelligence on different fields, especially for the achievements. (Fallahzadeh, 2011) Stated that emotional intelligence includes interpersonal skills, intrapersonal skills, moods, adaptabilities, stress management skills which have an effect on academic performance. He also stated that the aspects of personality such as feelings and thinking have an effect on academic success, moreover habitat status and emotional intelligence have a relationship between each other.

The emotional intelligence element self-awareness is the key to sensitize a person to strength and weakness. Self-awareness helps to make a person self-confident. The emotional intelligent element called emotional management/self-control helping for positive behaviour, thoughts, and prevent negative emotions. All students feel frustrations and tension at the time of exams and failures it is the emotional management which is helping to overcome this problem. Controlling the impulses helps students in academic achievements. The element empathy helps to understand others feelings, needs of others. So this ability will help for showing concern with others. The students who know emotions verbally (intention and tone of the voice) and non-verbal communication are able to avoid negative emotions (Yahaya, 2012). The study shows the lower empathy is associated with poor performance. When two students have the same level of IQ and different level

of empathy, the student with a high level of empathy gets a better grade (Nowicki and Duke, 1992).

Self-motivation (element of emotional intelligent) and academic achievement has a positive correlation. Self-motivation is an important element that helps students to read, finding new knowledge for their enhancement (Bernard, 1965). The structure of emotion helps the student to generate interest. The self-motivation helps for learning, this will lead to self-satisfaction (Yahaya, 2012). Students with social skills are able to crack good academic skills. Low academic skill effects student emotions and social skills of students especially the social skills to get support from the teachers (MacMullin, 1994). Social environment can lead to the behaviour of achievement and eliminate the unwanted emotions. The social skills make person a view to achieve good status in the society. The social skills such as attention, perseverance, teachers' attentions will help for the academic success. Students with social skills as compared to the peers who has less social skills are good in academics (Grossman, et al., 1997).

(Shiple, Jackson, & Segrest) The study shows that emotional intelligence is positively correlated with work experience and academic performance but there is no relationship between emotional intelligence of the students and age. The relationship between emotional intelligence and age is inverted u curve relationship (Derksen, Kramer, & Katzko, 2002). In another study which was conducted among students of education Faculty, University of technology Mara, (Mohd Mohzan, Hassan, & Halil, 2013) founded that there is a significant positive relationship between emotional intelligence and academic achievements. The researcher states that emotional intelligence has an important role among academicians, teachers with high emotional intelligence are able to manage the class room, and empathetic caring will help the academician to understand the students. (Malik & Shahid, 2016) Conducted the study among Business students in Pakistan, founded that to cope up with the business environment, the academic curriculum should introduce skills to improve emotional intelligence. (Yahaya, 2012) Founded that in order to obtain good academic achievements apart from effective learning students should be in a position to recognize self-emotions as well as others emotions. Hence emotional intelligence is not only successful for current academic status but for future success.

(Fayombo, 2012) Emotional intelligence components such as attending to emotion, negative expressivity, positive expressivity and empathic concern have a positive effect on academic achievements. Students who are aware of their emotions are able to make right decisions regarding their intelligence, this has a direct effect on academic performance. Likewise, those who are expressing





emotions positively are able to make a healthy relationship that will direct for the academic achievements. Similarly, students who are listening to their emotions before making decisions and considering others emotions more intelligently are able to attain good academic achievements. (Mandal, 2017) Achievements of the academics happen when applying more thinking power and consuming more time for study purpose. Hence students with better academic performance are able to understand teachers, peers, parents behaviour in a proper manner and this will help for the enhancement of the emotional intelligence. Therefore academic achievement is correlated with emotional intelligence. Student's emotional intelligence can improve by discussions, counseling and exposure to the outer world. (Ramesh, Thavaraj, & Ramkumar, 2016) Students with higher emotional intelligence are able to cope with social and emotional needs of others. When using emotional part of the brain students are not only able to expand their choice but to make rational decisions. This will help to student to overcome continuously making mistakes. The results show that students with higher emotional intelligence have significantly good academic achievements. (Malik & Shujja, 2013) Founded that there is a positive relationship between emotional intelligence and academic achievements. Also noted that students from public school are high on emotional intelligence compared to students from the private school. (Roy, Rashmi, & Suman, 2013) Stated that higher the emotional intelligence motivation for academic achievements will be high. In order to excel in academic life, introspection is important, that will lead to successful life. Bearing in mind emotional intelligence qualities such as knowing one's own feelings, understanding other's feelings, problem-solving, decision making, and intrapersonal and interpersonal skills will help for academic success (Ogundokun & Adeyemo, 2010)

The existing literature clearly shows that there is a growing evidence for the relationship between emotional intelligence and academic achievements. But none of the existing literature talks about the students' perception and lived experience of emotional intelligence and academic achievements. Hence the present study is undertaken to understand the phenomenon of students' perception regarding emotional intelligence and academic performance.

### 3. METHODOLOGY

This study tries to identify students' perception on role of emotional intelligence on Academic achievement, The relevance of emotional intelligence for day-to-day activities and to study how do students using emotional intelligence for dealing with the challenges of academic performance. Hence Exploratory research design was

adopted. Population of the study was the M.Phil. scholar studying in Mumbai. Purposive sampling technique was followed for choosing sample for the study. The Researched distributed Emotional intelligence scale developed by N.S schutte et.al in 1998 to the scholars for understanding emotional intelligence level. The 15 scholars who has scored high EI selected for the interview. Phenomenological approach was adopted for the study. A Semi-structured interview guide was used to conduct the interview, so that interviewer can add extra questions after gathering all the information from the participants. The rationale of semi- structured interview is to understand the lived experiences of participant for the described phenomenon.

## FINDINGS AND CONTRIBUTIONS

### Self- Management

The first factor, self-management includes 2 categories that are time management and goal fulfilment. Here time management trying to explain doing the given task at right time. Previous research saying that by concentrating on the task helps to improve concentration and it will help for the improvement of emotional intelligence (Schilling, 2013). The present research is concentrating on role of emotional intelligence on student academic achievement. So that when student improve concentration they can finish the work easily, that will help for time management skills and also helps for the improvement of emotional intelligence. This finding is supported by previous research, which explains the emotional intelligent element called self-management/self-control helping for positive behaviour, thoughts, and prevent negative emotions. (Yahaya, 2012). Previous research suggests that the emotional intelligence factors such as critical situations, self-regulation and flexibility in has influence on time management Brian (2007).

The second factor that is goal fulfilment helps for self-management. Which explains that fulfilling individual goal at right time helps to manage other work and helps to reach in higher positions by managing other works. The previous research explains that "many business people, educators, and politicians successfully use lists of tasks or goals to orient their schedule and provide an overarching theme to a part of the day, but it is often driven by meetings and schedules rather than priorities and people and these people need emotional intelligence to bring all this together" (Jensen, 2017). Which means goal setting includes proper skills like creativity, time management, critical thinking, decision making, prioritising the works etc. These all skills helps to improve emotional intelligence. Here the example for goal setting is "I planned well to complete my goal fulfilment. Each stages of my life I made some goals and tried to achieve it with the



support of my family and with my personal commitment". This example is supported by previous research. Emotional intelligence has impact on goal fulfilment or for individual achievements. (Dirksen, Kramer, & Katzko, 2002), (Mohd Mohzan, Hassan, & Halil, 2013), (Malik & Shahid, 2016).

Self-management is the part of emotional intelligence that helps for improvement of emotional intelligence. This will directly help for improvement of academics.

### Self- Awareness

The theme self-awareness has 4 categories that are self-improvement, values, habit and needs. These four categories together creating the theme self-awareness.

The category self-improvement, self-improvement helps for the personal growth and that helps for the increase in emotional intelligence. The example for self-improvement is "I am taking the responsibility which I can do for personal growth". This supported by existing research, the development of EQ is as important as IQ especially in the area of your own Personal development and an understanding of the self. (Cooke, 2013). Which clearly explains that emotional intelligence helps for understand one self. The understanding of one self helps for finding out strength and weakness of a person in academics as well as non-academics. So that individual can work on their weakness and can concentrate on their strength. This quality will helps for the self-improvement as well as for academic achievements.

The second category of self-awareness is values, which consists of personal values. Example for this "I am strong in my decision. I am confident in my decision I will not blame anyone and I will accept others values and opinion". This is supported by the previous research Emotional intelligence has significant positive impacts on both the dimensions of personal values (namely terminal values and instrumental values) (Anwar, 2017). Here the example is talking value as personal decisions. This is because individual who is taking proper decision or the value they will stick on their values and no one can change their minds for trivial things. This has direct effects on individual's emotional intelligence because this skills helps to understand who I am really is? And what is my skills? . The knowledge on personal values will helps for ones achievements.

The third category is habit which is explained by "I have a habit of studying every day and helping other people on their studies". The habit of study helps to improve concentration and knowledge. The knowledge helps to improve critical thinking, problem solving, Communication etc. which all are the components of emotional intelligence.

The fourth category is Needs (needs for esteem, belongingness, and achievements). The examples are "My self-interest helped me to complete my studies in successful way". "It was my need to achieve higher education rather than anyone else". This is supported by the previous research, Emotional intelligence tends to enhance beliefs in r speaking abilities to organise and execute the courses of action required for successful achievements. (Afshar, Rahimi, 2013).

### Motivation

The third theme is motivation which is categorised in to motivated by others and own emotions, motivated by personal characters and others.

The first category is talks about motivated by others and own emotions. The example for this is "My mother and friends motivated to achieve in education. Especially my mother, she used to give full autonomy on education." Which is supported by previous research, The element empathy helps to understand others feelings, needs of others. So this ability will help for showing concern with others. The students who know emotions verbally (intention and tone of the voice) and non-verbal communication are able to avoid negative emotions (Yahaya, 2012), Empathy, Emotional reflection, Insight, are all qualities measured in EQ tests, and all vital in relationship success, and personal success in everyday life.(cooke,2013). Empathy is an important element which comes under motivated by others. Which tells that understanding others and getting the same feelings helps to understand where we are and how we can reach near to others places. This skills helps to motivate students to reach in a good positions.

The second category is personal circumstances. While doing interview around four students among ten told their personal circumstances itself motivating them to study more and achieving more. Understanding ones circumstances is a good quality. Because what I felt these students are able to manage their emotions and trying to achieve their goals. Example for this is "I have lots of family problems. That itself is a motivational factor for me. I am the eldest one in my family I don't have father so it is my responsibility to take care my family and youngest brother education. The educational motivation is strictly based on my personal circumstances. And another example is, "Only for getting marks that doesn't motivate me. The motivation in my personal character is that I am trying to do the things for my improvement rather than showing someone". This is supported by the previous research, Self-motivation is an important element that helps students to read, finding new knowledge for their enhancement (Bernard, 1965).



The self-motivation is also consider as the element of emotional intelligence and here the author speaks that self- motivation leads students to read and finding the new knowledge. So that emotional intelligence has an influence on academic achievement.

### Decision Making

The fourth theme is decision making which is categorised on past experience and by understanding others emotions.

The first category talks about past experience, example for this is “The experience which I got from internship as well field work helped me to understand what others want. This helped me to take a rational decision while I am working in a group”. Supported by Shipley, Jackson, & Segrest) the study shows that decision is positively correlated with work experience. The past experience gives knowledge to the person and it will help to make rational decisions. Experience has more power than getting knowledge from the books. Previously an individual makes lots of mistakes with that experience they can take proper decisions in their life. And decision making is an element of emotional intelligence.

The second category is understanding others emotion example for this is “I used to make decisions in a group after asking everyone opinion. Because emotion has great influence on our decisions”. Which is supported by the previous research, (Fayombo, 2012) Students who are aware of their emotions are able to make right decisions regarding their intelligence, this has a direct effect on academic performance. Here in decision making empathy is an important element. Historically it says that emotional and logic cannot take a proper decision (Humphrey, et.al, 2014). Later the research shows that individual with empathy can understand other emotions and are able to make rational decisions without hurting others (Fallahzadeh, 2011). These skills helps for academic achievements. If a student able to understand what their families need and what their teachers and friend’s needs the individual decision will be based on others emotions. So that the decisions will be rational. This will helps for both sides.

### Communication

Communication is the final theme and the categories under communication are interpersonal factor, assertiveness and acceptance.

The first category is interpersonal skills which include attitude, value, beliefs and social networking. For an effective communication it is important to understand others values, beliefs and culture. One of the participant talks about culture and communication. He mentioned that while communicating one should know about others culture. Because when we are making fun of others the other person will not accept them in a same sense and there is a chance to hurt them. So culture has an influence on communication. It is important to respect others values and beliefs while communication. The personal values and beliefs are different from person to person, respect those values and communicate. This will helps to keep a relationship successful. As networking increases the individual can succeed in life. Because their information network is strong. This is supported by Students with social skills as compared to the peers who has less social skills are good in academics (Grossman, et al., 1997), The higher your EQ is the better chance you will have of being a success in social and personal relationships.

Assertiveness and acceptances are other category. Assertiveness is a skill saying “no” without hurting others”. Before taking any decision in a group it is important to ask the opinion of others so that the decision will be rational and others will feel they are the members of this group. This two category is supported by, When drill down into the behaviours that comprise Emotional Intelligence, it’s easy to see that the dimension of Assertiveness plays a key role in the way a person manages (or uses) Emotions. (Cannarella, 2016). The researcher (Bond,2010) found that acceptance and emotional intelligence are positively related. The communication is the part of emotional intelligence.

If a student is a good communicator, they are able to make more networks. The positive communication help person to find new opportunity and that will helps for academic success.

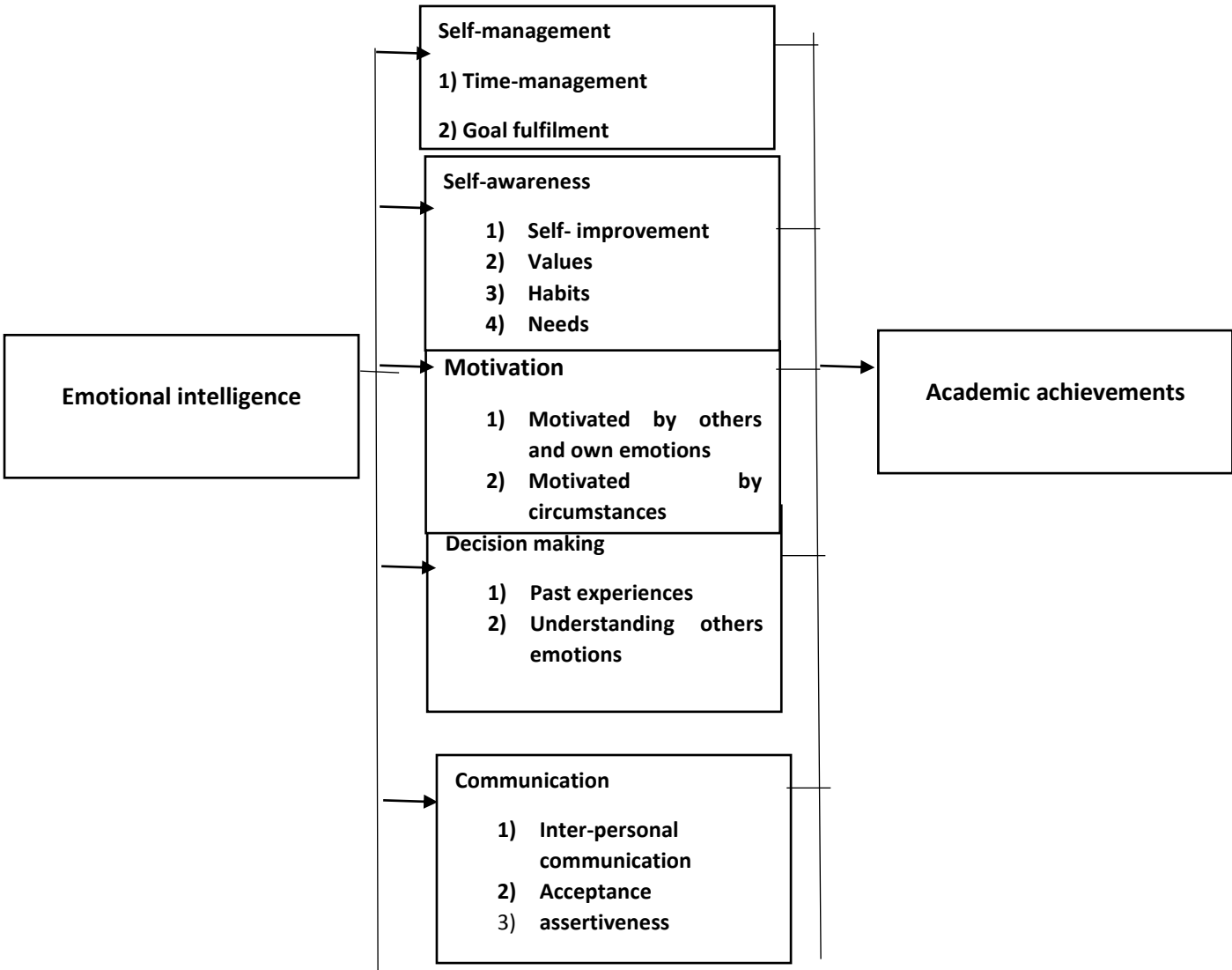


Fig.1

**CONCLUSION**

This qualitative phenomenological study addresses lived experiences of MPhil students from Mumbai. Research examines the influence of emotional intelligence on academic achievements from student’s point of view. The researcher aimed to find out the emotional intelligence of MPhil students and conducted interview to understand their perception on emotional intelligence and its influence on academic performance. The findings shows that students with higher emotional intelligence are able to perform good academic performance. The components of emotional intelligence such as motivation, self- management, self- awareness, communication, decision making has influence on academic performance. And the present research found student habit and acceptance helps to improve

emotional intelligence and through that students can improve their academic performance.

**SCOPE AND FUTURE DIRECTION**

This research contributed to the importance of the implementation of EI training. Respondents in this study identified the five EI components of personal and social competencies as key elements in achieving academic success. The participants’lived experiences in this research provided a better understanding of the importance of incorporating EI practices in their curriculum. This research study could have significant implications for institutions of higher education and also for future research.



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# INTERPRETATION OF MAGNETIC DATA CUDDAPAH BASIN, INDIA

**M. Preeti**

*Research Scholar, Department of Geophysics, Osmania University, Hyderabad, India*

## ABSTRACT

*In Andhra Pradesh, India in 2007 a sudden gas leakage was observed from the irrigation borewells. To investigate the subsurface structural features which leads to leakage of methane gas Magnetic studies, were carried out in this study area. Few analytical techniques like Horizontal, Vertical and Analytical gradients were applied to the data for delineation of structural features like faults/ fractures. Horizontal Derivative map shows that lateral extent of geological contacts/faults more accurately. From the Vertical Derivative map it is noticed that high anomaly represent sill body and a low indicates the presence of shales which is prevailing in this area. Analytical Signal contour map shows the closures "A, B & C" interpreted as highly magnetic bodies, sills. From all the analysis it is noticed that maximum borewells are located on the edge of the high and low anomalies.*

**KEYWORDS:** *Irrigation Borewells, Tadipatri shales, Sills, gas emanations and faults.*

## 1. INTRODUCTION

In the study area few villages of Ananthapur District of Andhra Pradesh, India, the gas emanations were observed along two North-South trending lines, most likely along two faults or fractures. It is likely that the existing deeper fractures extended up to the surface near the gas gushing irrigation borewells. These "gas shows" were first noticed in 2007. It is therefore important to know the locations of these fractures so as to predict the source regions of the gas. Secondly, it is quite likely that these fractures are shallow and geophysical tools such as magnetic methods can bring out important information that might help detect and delineation of these fractures.

## 2. GEOLOGY

The present study area is located in the western part of the Cuddapah Basin. (Vijayam,1968; Leelanandam,1980). The Cuddapah basin consists of a very thick sedimentary column with minor volcanic intrusions and is formed by the deposition of several discrete sub-basins with two litho-stratigraphic groups, each with distinctive rock assemblages and ages constituting the basin. The lower and older Cuddapah Super group occupying the entire basin is overlain by the younger Kurnool group in the western part (King,

1872, Nagaraja Rao et al., 1987). The study area consist of Tadipatri shales of Chitravati group with a few dyke and sill intrusions.

## 3. MAGNETIC DATA AND INTERPRETATION

Magnetic surveys were conducted along all available roads with a station interval of 200 m to obtain variation of the observed fields in the study area on a relatively broader scale. Since the station interval is relatively larger this is termed as semi-detailed survey. Figure 1 shows the layout map of magnetic observations along the traverses R1-R10 and T1-T4 covered about 64sqkm. A total of 280 measurements were taken for each method.

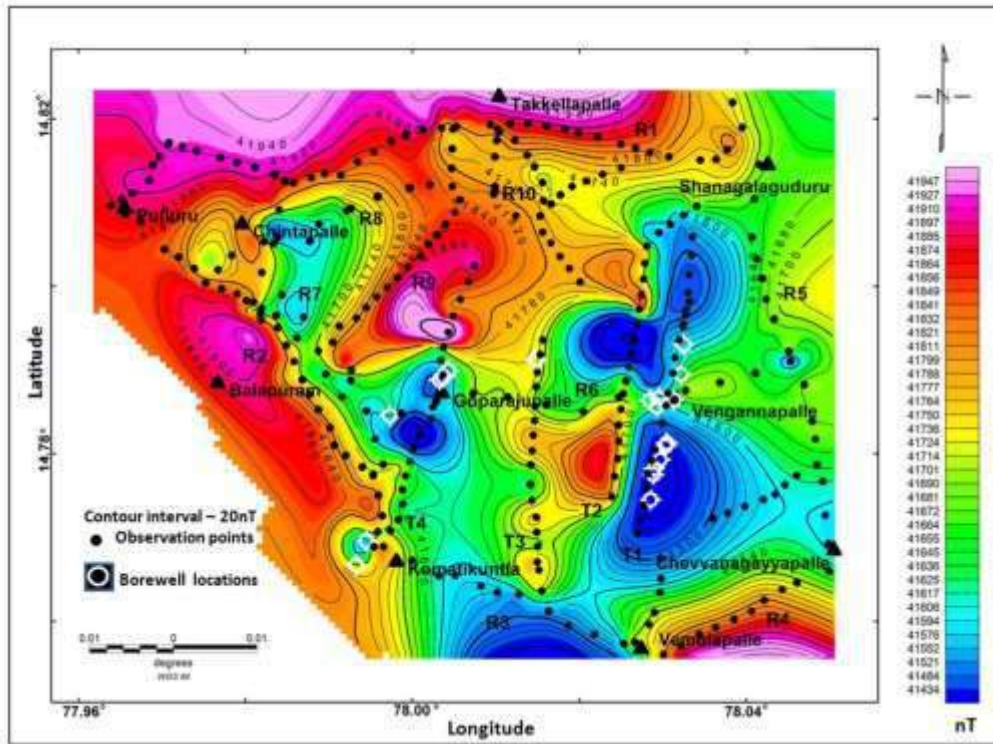
Keeping in view of the diverse geology and structure of the study area different computational methods - Horizontal, Vertical and Analytical gradients for delineation of faults, fractures, lineaments and edge detections of the geological formations have been deployed.



**i) Total Magnetic Intensity (TMI) Contour Map**

Figure 1 shows the Total magnetic intensity contour map of the study area with 20 nT contour interval. The magnetic anomalies ranges from 40727

nT in the east and middle part of the study area to 42520 nT in the West, North and the middle.



**Figure 1. Total Magnetic Intensity contour map of the study area.**

**ii) Horizontal Derivative Contour Map**

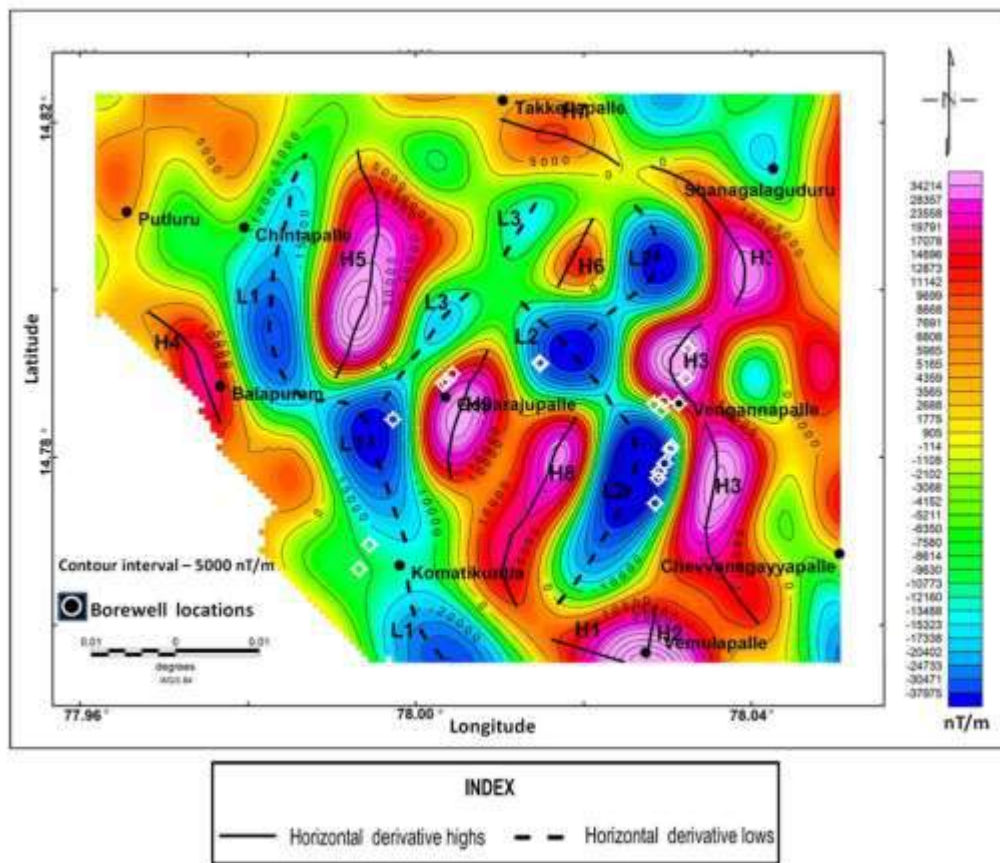
The total horizontal derivative is given by (Cordell and Grauch,1985)

$$THDR = \sqrt{\left(\frac{\partial T}{\partial x}\right)^2 + \left(\frac{\partial T}{\partial y}\right)^2}$$

Where T is the total intensity magnetic field,  $\partial T/\partial x$  and  $\partial T/\partial y$  are the two orthogonal horizontal derivatives of the magnetic field in the x and y

directions respectively. Horizontal derivative represents the rate of change of magnetic field in the x and y directions.

Horizontal derivative is very useful to detect the outline of the target bodies. The horizontal gradient peaks over the edges and is minimum over the body (Telford ,1990). contacts, fractures, faults and other lineaments and these features can be delineated or identified from magnetic intensity derivative maps (Dobrin and Savit 1988) - both vertical and horizontal. In view of this both horizontal and vertical derivative maps have been prepared for the study area.



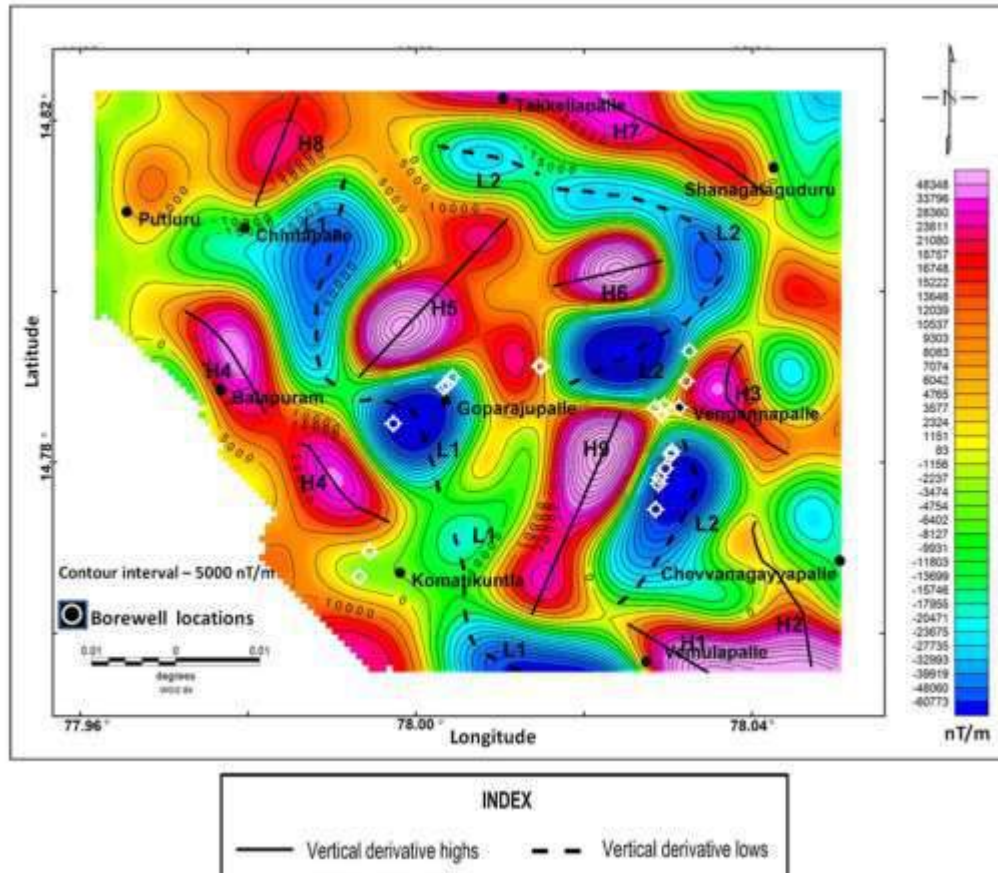
**Figure 2. Horizontal Derivative contour map of the study area.**

Figure 2 shows the contour map of the horizontal gradient along the X- direction, with a contour interval of 5000 nT/m. The contour map gives the approximate location of the source body. The high and low gradient trends (eight high trends - H1 to H8 and three low trends - L1 to L3) are delineated from this map. Figure 2 shows the contour map of the horizontal gradient along the X- direction, with a contour interval of 5000 nT/m. The contour map gives the approximate location of the source body. The high and low gradient trends (eight high trends - H1 to H8 and three low trends - L1 to L3) are delineated from this map.

### iii) Vertical Derivative Contour Map

Vertical derivative ( $\partial T/\partial Z$ ), is the rate of change of magnetic response with depth (Oruc, 2010). First vertical derivative data have become almost a basic necessity in magnetic interpretation. It is a zero phase filter, hence it will not affect the location of anomaly peaks, but it will sharpen the potential anomalies. Since Vertical derivatives generally exhibit a narrow width and these features are found to be locating the source bodies more accurately. In general, it is positive over the source, zero over the edge and negative outside of a vertical sided source. Units are Eotvos Unit (EU) (Telford, 1990).





**Figure 3. Vertical Derivative contour map of the study area.**

The vertical derivative of the total magnetic intensity contour map is shown in Figure 3 with a contour interval of 5000 nT/m. The Magnetic highs H1 to H9 and lows (L1 to L2) trending in NE and NW directions are delineated in this map.

#### iv) Analytical Signal Contour Map

The analytic signal (Roest et al., 1992) an important function that shows the relation of the magnetic fields to its derivatives, i.e.

Analytic signal:

$$AS = \sqrt{\left(\frac{\partial T}{\partial x}\right)^2 + \left(\frac{\partial T}{\partial y}\right)^2 + \left(\frac{\partial T}{\partial z}\right)^2}$$

Where  $T$  = total magnetic field intensity,  $(\partial T/\partial x)$ ,  $(\partial T/\partial y)$  and  $(\partial T/\partial z)$  are orthogonal components of the gradient vector of the total magnetic field.

While this function is not a measurable parameter, but it is extremely useful in the interpretation, as it is independent of the direction of

magnetization and the direction of the Earth's field. This means that all bodies with the same geometry have the same analytic signal. Further more, as the peaks of analytical signal functions are symmetrical and occur directly over the edges of wide bodies and directly over the centers of narrow bodies.



Interpretation of analytic signal maps and images should, in principle, provide simple, easily understood indications of magnetic source geometry (Milligan and Gunn, 1997). This function and its derivatives are therefore independent of strike, dip, magnetic declination, inclination and remanent magnetism (Debeglia and Corpel, 1997).

Figure 4 shows the contour map of the analytical signal (Nabighian 1972, 1974). From this map there are three prominent clusters marked A, B and C. "A" in the Goparajupalle, "B" in Vengannapalle and "C" in Vemulapalle villages. There are six highs (H1 to H6) and eight lows (L1 to L8), individual features delineated in the map and these features trend in NE and SW directions similar to the same as in the vertical and Horizontal derivative maps.

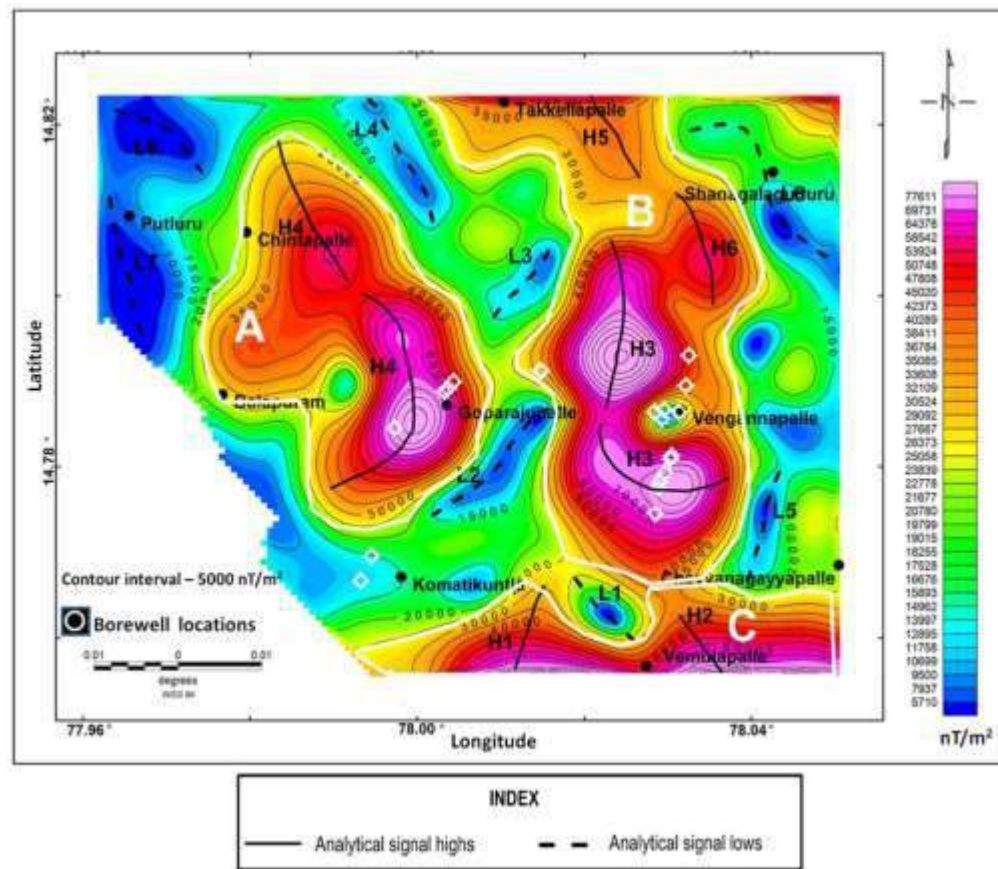


Figure 4. Analytical Signal contour map of the study area.

#### 4. CONCLUSIONS

From the Horizontal Derivative map (Figure 2), the anomalous features on this maps are often useful in defining the lateral extent of geological contacts/faults more accurately. The 'highs' and 'lows' obtained in the present study area show two prominent trends, viz., NE-SW and NW-SE. It may be noticed, maximum number of borewells yielding gas are located on the edges of the bodies.

Considering the geology of the study area, in this Vertical Derivative map (Figure 3), for example a magnetic highs (red) represent a sill body at depth while a low (blue), can be attributed to shales and sedimentary rocks. Thus These are inferred to represent such as sill bodies the geological contacts/faults and fractures etc. The borewell locations may be seen to be either falling on the cross over of the high and low magnetic field or in the low values.



In the Analytical Signal contour map (Figure 4), geologically the closures “A, B & C” may be interpreted to correspond to highly magnetic exposed/hidden sills. It is clearly seen in the figure that maximum borewells are located on the high anomaly zones “A and B”.

#### Acknowledgements

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# RACE AND ETHNIC DISPARITY AND IMPACT OF WESTERN CULTURE IN ZADIE SMITH'S *WHITE TEETH*

V. Amirthavalli<sup>1</sup>, Dr. L. Amutha<sup>2</sup>

<sup>1</sup> M.A., M. Phil., SET., NET., Ph. D Research Scholar and Assistant Professor, PG & Research Department of English, Srimad Andavan Arts and Science College (Autonomous), Trichy, Affiliated to Bharathidasan University, Trichy

<sup>2</sup> M.A., M. Phil., SET., Ph. D Research Guide and Assistant Professor, PG & Research Department of English, Srimad Andavan Arts and Science College (Autonomous), Trichy, Affiliated to Bharathidasan University, Trichy

## ABSTRACT

*Zadie Smith is an emerging British writer known for her treatment of race, ethnicity and culture in her novels. She explores the different minority groups within a multicultural society. She makes the readers realize the traumatic effects of migration. Smith has portrayed the positive and negative aspects of her immigrant characters and their experience. Race and ethnicity are one of the key terms in post colonial theory and cultural anthropology. The terms race and ethnicity are often used interchangeably but they have different meanings. Ethnicity or ethnic group is a term defined by their distinctive cultural attributes such as language and religion. On the other hand, race is understood by most people as a mixture of physical, behavioral and cultural attributes. Moreover, race is a physical difference, and ethnicity is a cultural difference. Race and Ethnicity cannot substitute for each other. Race cannot be replaced by ethnicity. This paper delves deep into Race and Ethnic disparity and impact of western culture in the novel White Teeth.*

**KEYWORDS:** Race, ethnicity, culture, tradition, multiculturalism, cultural identity, cultural diversity, immigrants.

## INTRODUCTION

Zadie Smith is a British writer, born to a Jamaican mother and an English father. Her debut novel *White Teeth* (2000) fetched her many awards and honors including The Whitbread First Novel Award, Commonwealth Writer's First Book Prize. The setting of the novel is Willesden, multicultural London. England is known for its class structure and racism is deeply embedded in British culture. Race and ethnicity play a crucial role in the modern world even amidst globalization.

## RACE, ETHNICITY AND WESTERN INFLUENCE IN *WHITE TEETH*

*White Teeth* is a maiden novel by Zadie Smith. The novel focuses on three different families of mixed

ethnicity, race and culture. Race and ethnic disparity is evident through the portrayal of the characters. The novel opens with Archie Jones, an English man and World War II veteran who takes decision by flipping coins. Being an Englishman Archie experiences a string of disappointments in his life. He is unable to find better employment even in his own country after World War II. This makes him feel as an immigrant in his own country. He works in a paper folding company and gets a meager salary. Archie is not even successful in married life. He fails in his first marriage, and remarries Clara Bowden.

Clara Bowden is a black immigrant from Jamaica. Though Clara was born in a highly religious family, she wants to be free from her religious Jamaican mother, so she agrees to marry Archie Jones.



Clara breaks away from her life of piety when she gets exposure to western culture. The reason behind Clara's second marriage is she wishes herself to be addressed as English rather than a Jamaican. Even before marriage, Clara meets Ryan Topps, a white student at her school who introduces her to drugs. She indulges herself in consuming drugs which is totally against her religion and family. Consuming drug is one of the daily routines in western culture. The People of Jamaica are exasperated by racial discrimination. So they are not willing to marry or mingle with English people, for instance, Hortense Bowden; Clara's mother disagrees with Clara and Archie Jones's marriage, because Archie is an English man. It is evident as Clara finds "In Jamaica it is even in the grammar: there is no choice of personal pronoun, no splits between me or you or they there is only the pure homogenous I (327).

Irie Jones, the daughter of Archie Jones and Clara Bowden. She resembles her black mother, a typical Jamaican. Irie is a fat hopeless young woman. She is afflicted by her own racial identity. She does not accept her identity as a Jamaican. She attempts to straighten her hair in order to meet the white people. Though Irie is hopeless, she is quiet intelligent and bold. She desires to seek out her own place in the world especially in England because Irie is dominant by British culture and its people. Irie admits her ugliness in every place because of her big size, her buck teeth, glasses, braces and her dark skin. However Irie is deeply interested in her own family history and lives with her grandmother, she has a flair for western culture. She aspires to create her identity as an English girl rather than a Jamaican. This is evident through her decision to become a dentist, at the suggestion of Marcus Chalfen, a white man. Irie is fascinated by the Chalfens and wants to merge with them. "When Irie enters the threshold of the Chalfen house, she feels an illicit thrill, like a Jew munching a sausage. To Irie, the Chalfens were more English than the English" (328).

The Chalfens are from a white upper class family, they believe themselves to be liberal, cultured and highly educated people. They create a strong impression on immigrants through their westernized culture. Marcus Chalfen is a white Oxbridge (refers to Oxford and Cambridge) scientist. He constantly works on the project called Future Mouse. He strictly controls the project. Marcus effectively colonizes the animal in the name of science and technology; this shows that the colonization of western countries on non-western countries in the name of helping these countries' development. "The Chalfens had no friends. They interacted mainly with the Chalfen extended family

(the good genes which were so often referred to: two scientists, one mathematician, three psychiatrists (314).

Joyce Chalfen, Marcus's wife is an acclaimed botanist and writer. She is interested in the process of cross-pollination in order to create beautiful gardens. This is evident as she says, "now we are more adventurous, positively singing the praises of cross-pollination where pollen is transferred from one flower to another on the same plant ---- The birds and the bees, the thick haze of pollen- these are all to be encouraged (309). She is contrast to her husband's views and ideas. Marcus instigates people from other countries to follow his own culture and cultural ideologies, whereas Joyce Chalfen is fascinated by people of different cultures and ethnicities. Every Chalfen proclaims that they are mentally healthy and emotionally stable. The children have their oedipal complexes early, and they adore their mother and admire their father, unusually this feeling only increase as they reach adolescence.

The vast majority of Bangladesh's inhabitants are Bengalis, who are largely descended from Indo-Aryans who began to migrate into the country from the west thousands of years ago and who mixed within Bengal with indigenous groups of various racial stocks. Samad Iqbal is a World War II veteran and an immigrant from Bangladesh. Racism greatly impacts the Iqbal's lives. Being a Muslim Samad finds it difficult to lead his life in England. As an immigrant he is unable to get better employment in London but only finds employment in an Indian restaurant owned by his cousin. Samad's family is a lower working class family but he takes pride in his job, whereas his sons are ashamed of their position in the society and they want to reconstruct their identity.

Throughout the novel, Samad struggles with his religious beliefs, his Bangladeshi heritage, and his role in western society. On the other hand, he is religious, determined and eager to preserve his Bangladeshi culture. But Samad finds it difficult to follow his cultural ideologies in an alien land. In order to keep away the corruption of western society and to preserve his culture and religious beliefs, Samad sends his elder son Magid to Bangladesh. In contrast, Magid is reluctant to follow his own religion and becomes an atheist and a scientist without considering his father's ambition. However, Samad is also drawn to certain aspects of western culture. This is evident through his affair with his children's white teacher Poppy Burnt Jones and loses his moral values. When Samad's twins sons' witness this extra marital affair, they intend to



create their identity as English or British rather than Bengali in multicultural London.

Except the Chalfens, every other character in the novel is attracted towards western culture. Alsana is Samad's wife and an immigrant. She is twenty years old when she marries Samad. Though she is younger than her husband, she is strong, determined and unafraid of expressing her own opinions. In certain parts of India, the house wives never express their views or questions their husbands whereas Alsana often finds aspects of western culture and this is evident when she raises her voice against her husband and demands respect from him.

## CONCLUSION

In conclusion, *White Teeth* recapitulates race, ethnic disparity and western influence in the modern era. Throughout the novel, teeth symbolize people. Teeth are white even if a person's race, culture or ethnicity is different and it is a common phenomenon. In *White Teeth*, Smith tells her readers that people whoever comes to England as immigrants try to create their identity as British even amidst race and ethnic disparity. The reason behind this transformation is the impact of western culture and people from different cultures are integrated with the advent of globalization. The novel ends with a ray of hope for a peaceful multicultural world.

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# LEARNING STYLES: AN OBJECTIVE PERUSAL OF THE EFFICACY OF ESL TEACHING STRATEGIES IN A LEARNER-CENTRIC ENVIRONMENT

Sulabha Dixit<sup>1</sup>, Dr. Monica Singh<sup>2</sup>

<sup>1</sup> Ph.D research scholar, Department of Humanities and Liberal Arts,  
Rabindranath Tagore University, Bhopal

<sup>2</sup> Director, Finishing School & Corporate Relations, Scope College of Engineering Bhopal

## ABSTRACT

For any teaching strategy to be effective, the learning needs, capabilities, preferences, strengths, weaknesses and ambition of the learner should be kept in mind. These particularities of the learners constitute their learning style and the rising popularity of English as a second language has necessitated the institution of several ESL teaching strategies that are based on the unique learning styles of the pupils. While some learners need to forge a bond with the teacher before they become receptive, some others require constant engagement in interesting tasks. New words and rich vocabulary, come naturally to some but other students like learning by doing. A few students who like structure, can understand and apply grammar rules although a number of them learn language through reading and listening to stories. In teaching of English as a second language, the first language or the mother tongue is used as a scaffold to begin with and is used in varying degrees of frequency in an ESL class, according to the need of the learners. The seven primary leaning styles are visual/spatial; aural, verbal, physical, logical, social (interpersonal) and solitary (intra-personal) which may be found in the learner, singly or in combination with several others. These learning styles in their turn influence the choice of ESL strategies which are of several types, viz: Memory; Cognitive; Comprehension; Metacognitive; Affective and Social. the learning process is most effective when it is in line with one's unique learning style and preferences.

**KEYWORDS:** learning, teaching, strategy, style, preference, ESL, learner, mother tongue, second language

## INTRODUCTION

The belief that Language is imbued with the power to transform lives and enable its user to progress in the quest for accomplishment, is an unquestionably established premise. It is only natural then that the inability to express verbally renders one dumb in the literal sense and figuratively too. Articulation is a valuable skill, and its acquisition is only possible with a good command of the Language. Thus, anyone who wants to get ahead in life needs the backing of good communication skills, of which Language is an integral part. As English is the most sought-after Language today, the interest in learning it as a second Language is globally apparent. ESL teacher educators have developed novel techniques and strategies to facilitate the acquisition of English as a second language. effectively. This paper endeavours to look at some of the learning styles and strategies devised to benefit learners of English.

## OBJECTIVE

To understand the different learning styles adopted habitually by individual learners and examine how their preferences, strengths, and weaknesses determine their inherent learning style for second language acquisition. This understanding is necessary for selection and implementation of a teaching strategy (or a combination of the same) for enhancing the effectiveness of instruction in an ESL classroom.

## METHODOLOGY

This paper is a result of inductive research approach. The methodology adopted involved observation of learning patterns in the ESL classroom, extensive review of literature, examination of the premise through study of patterns, resemblances and regularities in experience before reaching a conclusion.



## RESULT

Educationalists have identified several learning styles, and we shall examine a few of them here:

### Community Language Learning

In this method of learning English, there is a great emphasis on the establishment of a bond between the teacher and the taught to make the student free of anxiety issues related to learning an unfamiliar language. This technique uses a lot of the L1 (mother tongue) for the purposes of translation, quite unlike the other methods and approaches of teaching English as a Second Language. (Suarez-2001).

### Task-Based Language Learning

Task completion is the number one goal of this approach to learning English. A set of relevant and interesting tasks are devised by the teacher for the students who are expected to draw on their previous knowledge of English to complete the task with as few errors as possible (Teale, 1989).

### The Lexical Approach

Based on computer studies, the Lexical syllabus or approach is to identify the most commonly used words and teach them to the learners in order of their frequency and use. This approach to language learning focuses on vocabulary acquisition and teaching lexical chunks. Teachers of the Lexical Approach make a great deal of effort to develop authentic materials and to create realistic scenarios for more valuable learning. (Wood, 1999).

### Total Physical Response

Popularly known as TPR, this is an approach that follows the idea of 'learning by doing'. Total Physical Response requires beginners to learn English through a series of repetitive actions such as "Open your book", "Come here"; "Close the door", "Go there", "Stand up", "Walk to the cupboard and open it." etc. The most important skill being developed through TPR is aural comprehension, and everything else will follow naturally later (Bier, 2010).

### The Structural Approach

Just as the name suggests, this learning method is all about structure in recognition of the fact that all Language is composed of complex grammar rules. According to these rules, the English Language needs to be learnt in a specific order. For instance, the verb "to be" is taught prior to teaching the present continuous, which requires the learner to use the auxiliary form of the verb "to be." (Chamot, 2004).

### EFL: English as A Foreign Language

EFL stands for English as a Foreign Language. This type of English learning is chiefly

Language based. A typical EFL English class is for pupils who do not have English as a first language. The same method may of course, be used for learning other languages as well.

### Content and Language integrated learning

The main feature of CLIL (Content and Language integrated learning - CLIL) is the learning of content through an additional language, be it foreign or second, thus teaching both the subject and the Language simply. No subject is taught in English. EFL is the type of lesson that a non-CLIL school offers to students who want to learn English as a second language.

### Immersion: Integration of the subject

At international schools, one commonly encounters such a type of education. It is the type of language learning where students are immersed in the second Language during the teaching of all the subjects. However, not much attention is focussed on the target language itself as it is the medium of instruction, and therefore, it is assumed that the learners will master it eventually. The main difference between CLIL and immersion is that in the CLIL approach, attention is paid on the subject as well as on Language but the teacher in an immersion course does not focus on language teaching.

### CBLT: Content-Based Language Learning

Content through Language. This learning style also combines both the content and the Language but the main difference between CBLT and CLIL is that the subject is taught by a language teacher and not the subject teacher. For instance, when an English teacher teaches Mathematics, the focus would be primarily on Language and not on the subject, which happens to be mathematics.

### CLIL: Full integration of both content and Language

Content and Language Integrated Learning is the learning style that promotes second language learning by making students follow lessons taught in a second language by subject teachers who focus on both Language and content. The challenge here is that such a learning style requires teachers to be proficient in the subject and the Language. If handled correctly, giving sufficient time to the subject in question and also focusing on Language when needed, enables the students to learn languages quickly. With a wide variety of teachers interacting with them, the students get all kinds of exposure to different types of language input. Such an experience only adds to the mastering of the target language.

### The Most Effective ESL Teaching Strategy

All teachers will agree that each of the students has a different personality, learning styles

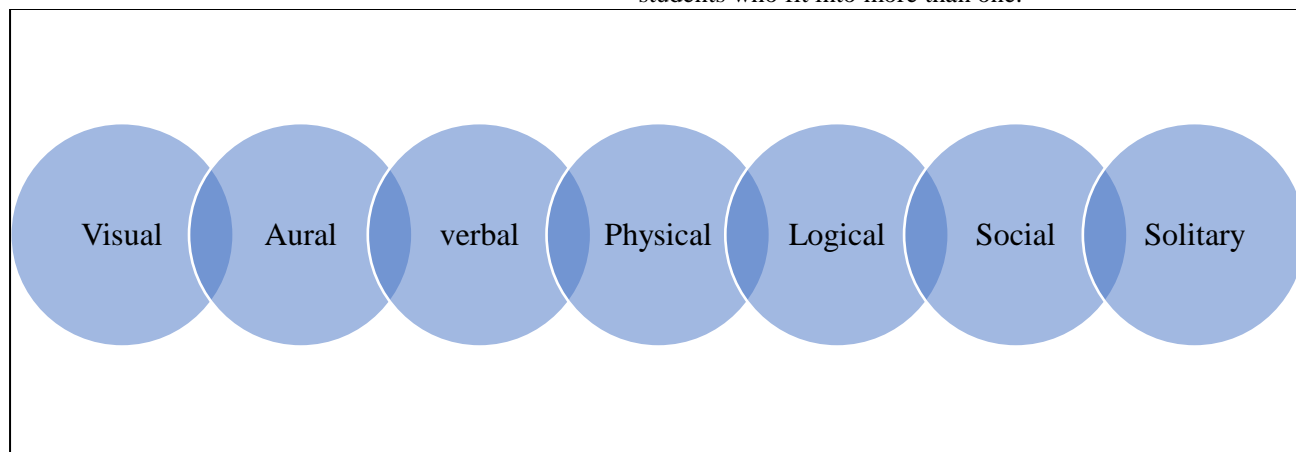




and preferences; therefore the best ESL teaching strategy would take into account all of those and integrate a variety of methods and techniques that would be appealing to this diversity of student types., simultaneously allowing the teacher to maintain

relative flexibility in adapting to various classroom situations.

**Seven major learning styles** have been identified based on differences in student preferences. As each category is defined broadly, it's common to find students who fit into more than one.



#### 1. **Visual** (spatial)

For visual learners, pictures and images are the preferred medium of learning as they love to see lessons come to life. Visual learners often sit in the front row during a class to get a full view of whatever the teacher is doing or showing. The teacher's body language and facial expressions are observed keenly by such learners, and they try to steer clear of potential visual obstructions and distractions in order to get a spatial understanding.

#### 2. **Aural** (auditory-musical)

Auditory learners rely primarily on sound for their learning, and music is often the most appealing medium of learning for them. Verbal lectures, discussions and audio presentations are, for them, the best way to acquire information.

#### 3. **Verbal** (linguistic)

Such language learners are those who have a unique ability to pick up new words and learn best through the use of words, irrespective of whether they are presented in speech or writing. Students belonging to this category prefer hearing a detailed explanation while learning something new, rather than viewing a physical, visual demonstration.

#### 4. **Physical** (kinesthetic)

Most hyperactive students may simply be curious kinesthetic learners who prefer to use their body, hands and sense of touch to explore and make sense the world around them. Such students tend to have difficulty sitting for long periods in one place. However, with the right strategy, an expert teacher may entice these energy bundles into getting involved in the learning process.

#### 5. **Logical** (mathematical)

These students look for logic, reasoning and systems. They often have a keen sense for numbers, sequence association and problem-solving ability. An expert teacher is expected to identify these traits in the pupil and develop these skills to their advantage.

#### 6. **Social** (interpersonal)

Some students learn best in interactive settings. These social (interpersonal) learners prefer group learning and social interaction streamlines their learning experience. They express themselves vocally and are always ready and willing to apply what they have learned in interactive settings.

#### 7. **Solitary** (intrapersonal)

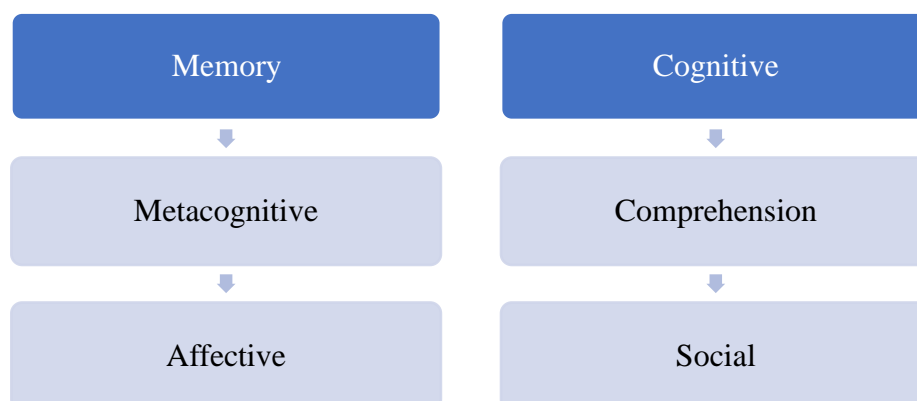
These types of students are the quiet and self-sufficient ones who can work alone with minimum instruction from or supervision of the teacher. Oftentimes they are labelled as shy, but these solitary learners can be pretty extroverted when given the right chance.

Having discussed the various types of learners, let us take a look at a variety of Language learning strategies that are being used to bolster the language learning experience.

#### **Language Learning Strategies adopted by learners**

As in any other discipline, strategies in language learning can facilitate the learning experience of every learner of the English language. The steps taken to learn a language determine the ultimate language performance. It is defined as "specific actions, behaviours, steps, or techniques — such as seeking out conversation partners or giving oneself encouragement to tackle a difficult language task — used by students to enhance their own learning" (Scarcella, p. 63).

### Six commonly used strategies for learning a language



However, each individual learner has a preference for strategies that she uses more than others.

#### Memory Strategy

This is an age-old strategy for learning anything. The human mind is gifted with a remarkable ability for memorising. Learners who adopt the memory strategy depend on their ability to remember what they learn and devise ways to commit information to long-term memory. Some of the ways adopted to enhance memorisation are by creating mental linkages or a word-meaning map in their brain and then retrieving that information later when needed. This strategy aids the memorisation and recall via sound (e.g., rhyming), pictures (e.g., a mental image of the word itself or the meaning of that word); sounds and images in combination (For instance, the keyword method), movement ( For e.g., total physical response), mechanical aids like flashcards or location (e.g., its position on a printed page or writing on a blackboard).

#### Cognitive Strategy

Learners who tend to analyse and rationalise (use reason and logic) are the ones to adopt the cognitive strategy. The formation of mental codes and their revision helps these learners to receive and retain information in order to reproduce it later in the target language. Adoption of this strategy enables one to internalise the Language through analysis, reasoning, note-taking, outlining, summarising, synthesising and practising structures and sounds formally in naturalistic settings.

#### Comprehension Strategy

Those who use the comprehension strategy often guess the meaning of unknown words while reading and listening. When such learners are speaking and writing, they overcome gaps in knowledge by replacing what they do not know with words that they know or with longer phrases.

#### Metacognitive Strategy

Students who adopt this strategy are able to focus, plan, arrange, and evaluate their own learning process. Such people have the acumen to identify and monitor their learning style, preferences and needs. They are able to gather and organise learning materials, arrange study space and maintain a schedule for L2 learning, revision, monitoring of mistakes and evaluation of task success. Such are the characteristics of Metacognitive learning strategy.

#### Social /Affective Strategy

These learners are social beings and learn best in social situations that help them to feel motivated, ask questions, facilitate conversation and learn the Language through conversation, communication and discussion with others. Interpersonal interaction is an important learning aid for those who adopt the social/affective strategy.

#### CONCLUSION

It is but obvious that while all the learning strategies mentioned above have their own advantages and shortcomings, each individual learner will adopt one or more of those strategies to tackle the task of learning. Research shows that effective learners are those who use an array of strategies to suit the occasion and need. Optimal learners come up with ways to amend their use of strategy and to develop combinations of strategies that work in their favour (Oxford, 1990). Through this study of learning styles and strategies, it is quite evident that each individual learner's learning style significantly influences the choice of learning strategy. When left to learn the Language by themselves, without any prompting, encouragement / guidance from the teacher, or required by the lesson itself to use a certain set of strategies, learners usually choose to use strategies that reflect their own basic learning styles (Ehrman, 1989).



This study of learning styles and strategies indicates that the learning process is most effective when it is in line with one's unique learning style and preferences. In order to determine which learning strategy to adopt one must first identify one's preferred learning style and this diligence will help the learner to acquire knowledge quickly and effectively.

Research has indicated that successful learners are more open and receptive towards other learning styles to optimise the learning and be able to take in and internalise materials or perform well in assessments, regardless of their nature.

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# TRANSITIONAL EXPERIENCES OF TERTIARY EDUCATION SUBSIDY GRANTEES: A QUALITATIVE STUDY

**Helen C. Fuentes, Ph.D.**

*Assistant Professor, Eastern Samar State University, Eastern Samar, Philippines*

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## ABSTRACT

*This is a qualitative research describing the transitional experiences of Tertiary Education Subsidy grantees in Eastern Visayas. The participants were fifteen (15) purposively selected key informants from different SUCs in Region VIII. Using thematic analysis, the results revealed that prior to inclusion to the Tertiary Education Subsidy Grant the participants experience financial difficulties in sustaining their school and household needs; as a TES grantee, participants indicated a positive impact of the grant to their family and personal economic capacity; participants reported the problems they encountered such as delayed release of fund and difficulty in the enrolment of new cash card; the grantees claimed that they were thankful for the said grant and expressed their gratitude to the government.*

**KEYWORDS:** TES Grantees, transitional experiences, personality adjustments, subsidy

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## INTRODUCTION

Education is generally accepted as a public good and human right. There is no doubt that government should subsidize education. Government in various countries has aimed at providing “opportunities for everyone who aspires to higher education to attend programs appropriate to their abilities”. Until now, making advanced education more accessible to poor however is a significant goal of any administration and the fundamental instrument to accomplish this goal is financing public advanced education foundations HEIs (Temple, 2009).

In the Philippines, the public higher education enrolment trends increases with the implementation of the Free Tuition Law where the student financing subsidy is provided on a far larger scale. Generally, the enrolment status of HEIs in the country decreased by 16.93% from AY 2016-2017 to AY 2017-2018, this decrease was associated with the implementation of K-12. However, an increase was recorded from AY 2017-2018 to AY 2019-2020 with the total enrolment of 2,981,803; 3,212,542; and 3,408,425 for AYs 2017-2018; 2018-2019; and 2019-2020; respectively. Moreover, the data show rising number of graduates in the last four academic years with total number of 645,973; 703,327; 751,310; and 796,576 for AYs 2017-2017; 2017-2018; 2018-2019; and 2019-2020; respectively (CHED Higher Education Indicators, 2020).

In 2018, the Tertiary Education Subsidy was realized through the Commission on Higher Education (CHED) Memorandum Circular No. 2018-0004. TES for Filipino students being one of the five components of RA No. 10931 is directed by the UniFAST Board and the implementers of the program are SUCs and select LUCs. The Tertiary Education Subsidy was set up for all Filipino students who took on undergraduate-post-secondary secondary programs of SUCs and LUCs private and all TVIs. The TES is the initiative of the Philippine government to provide poor but capable students with access to higher education. It intends to raise the quantity of advanced education graduates among financially disable families through direct arrangement of financing for their schooling. A TES grantee gets a yearly subsidy of Php40,000 altogether. This incorporates Php2,500 per semester for course books and other learning materials and Php3,500 each month for 10 month time as allowance. It is then the main purpose of the study to describe the transitional experiences of the TES grantees in Eastern Visayas.

## METHODS

This study utilized thematic analysis as the method of analyzing qualitative data. The participants were purposively selected from six (6) out of 10 State Universities in the Eastern Visayas Region, Philippines. These



institutions were selected because of their strategic locations in the region and based on the number of TES grantees enrolled in the main campus.

**Table 1. Number of Respondents**

| SUCs<br>(Main Campus) | No. of KII<br>Respondents |
|-----------------------|---------------------------|
| State University 1    | 2                         |
| State University 2    | 2                         |
| State University 3    | 2                         |
| State University 4    | 2                         |
| State University 5    | 3                         |
| State University 6    | 4                         |
| <b>Total</b>          | <b>15</b>                 |

Utilizing the purposive sampling, the key informants were selected from the first batch of TES grantees in the region or those who have been a grantee for three (3) academic years. The sample size was not pre-determined. Data gathering continues until data reaches the saturation point, that is, the stage wherein further observations and interviews add little or nothing to the codes identified by the researcher (Vincze, 2010). The instrument of Maranda et al. (2016) which includes open-ended questions that are intended to assist the TES grantees in expressing their experiences and the problems that they may have encountered on being a TES grantee. However, in an instance that a respondent was not able to attend the call, the interview was done through exchange of messages through messenger or exchange of emails between the respondent and the researcher. The interview transcripts were analyzed using thematic analysis method.

### Ethical Consideration

In trying to ensure that the study adheres to acceptable ethical standards, the following considerations were followed: (1) Consent form was administered to respondents before formally starting with the data gathering; (2) Anonymity was observed while obtaining relevant information. This is done to assure the respondents that all information extracted from them remain confidential; (3) Respondents were informed of their participation in the study and the type of data to be obtained from them; (4) Respondents' consent was secured on the condition that all information derived from the questionnaires and their participation in full volition will not in any ways incur harm or pose any type of risks; and (5) The University Research Ethics Committee approved this study (Approval Reference Number 009-21-GS).

## RESULTS AND DISCUSSION

The final organization presented in Table 2 defines a total of 18 codes, 7 categories within the three themes: (1) pre-TES grant struggles; (2) the experience as TES grantee; and (3) attitude toward the scholarship grant.

### Pre-Tertiary Education Subsidy Grant Struggles

Participants described their experiences prior to inclusion to the Tertiary Education Subsidy grant based on their perceptions on the economic status of their family and as a student (SC: "economically deprived households and financial difficulties of the student). Thus, all (15) participants believed that their family have unstable income to support their daily needs. For example, the grantees affirmed:

KI 1: *"During my first year in college, it was very hard for me due to financial difficulties. Though it was already free tuition it was very hard for my family to support me with the miscellaneous fees. In my pocket, I have only 300 pesos allowance per week less the fare, rice, and viand. I don't have any more allowance for my school needs. It was really a big burden to my parents. Our family income is not enough for our family necessities"*

KI 6: *"Being a non-TES grantee was very hard for me and my parents. I experienced going to school with money that is only used for my fare from home to school and vice versa. My parents are struggling with our financial needs."*

KI 7: *"Being a non-TES I struggles a lot since my father is a farmer and my mother is a housewife they didn't give me any money for my studies because the money that they make from copra is not enough."*



KI 9: *“My parents and my older brother don’t have a stable income that will suffice and support our daily needs.”*

Further, six (6) grantees felt that reliance on farming and selling of root crops cannot sustain their needs, like:

KI 3: *“The income in farming is not sufficient enough to buy and support our daily needs and most especially our educational necessities.”*

KI 4: *“In fact, my parents are relying on farming root crops like kamote (sweet potato) and sell them during tabo (market day) every Friday at the town market.”*

KI 10: *“Farming root crops is seasonal. So, it was hard for us to save money.”*

As many as ten (15) shared that financial difficulty of student leads to giving up of dreams and aspirations and on the other side it made them strived to earn an income to support their studies. The grantees affirmed:

KI 1: *“I worked as house helper at Tacloban for me to save money so that I can enroll in the opening of classes. After a month I went home for the school enrollment and I am happy that I had provided the things I need in the first month of my schooling.”*

KI 2: *“When I was a non-TES grantee I experience financial hardships for my studies.”*

KI 5: *“It was difficult for me to ask money for my school needs knowing the situation of my family.”*

KI 6: *“Before being a TES grantee, I usually work during weekends for my allowance, my allowance was just enough to provide my personal and school necessities”*

KI 8: *“There comes a time that I and my parents are at the verge of giving up our dreams and aspirations. Even a single sheet of paper contains tears and sweats.”*

The statements of the participants focused on their economic instability prior to the inclusion to the said grant. These evolved from being a member of an economically deprived household which affect their financial capacity to pursue tertiary education. However, a positive response was remarkable – a participant who claimed that financial constraints will not hinder in achieving goals instead one should strive to earn income, the participant elaborated that having an earning to sustain personal and school needs is the true meaning of success. This statement conforms to the findings of Nnamani et al. (2014) that self-sponsored students are more satisfied with their academic performance than those that get money either from their parents or from a scholarship fund.

### **The Experience as TES Grantee**

In the transcripts, the grantees also focused on their experiences as TES grantees (C: experience as TES grantee). All participants indicated a positive effect of the TES grant to their family, four (4) considered it as a blessing while six (6) expressed that it helps the financial capacity of their family. For example:

KI 1: *“It was a blessing and good news to my family. My parents will no longer be indebted with money from their friends.”*

KI 6: *“TES doesn’t just support me but my whole family as well.”*

KI 7: *“With the subsidy I can help my younger siblings with their allowances and school needs.”*

The grant has positive effects to the participants. It brought various experiences to the grantees as a source of hope, that boosted their confidence and enhanced financial management skills, the grantees affirmed:

KI 1: *“Indeed, Tertiary Education Subsidy (TES) was a great help for me and my family. I can buy books, food, pay my boarding house in advance and I am no longer afraid in attaining my dreams.”*

KI 2: *“I experienced to withdraw money in a bank for the first time and most of all I*



- learned how to handle my finance right.*
- KI 3: *“It really help me and my family a lot, it also helps my sisters and brothers who is still studying. It makes my studies easy because I can now buy things and pay for my studies.”*
- KI 4: *“Now as a TES grantee, I was able to experience things like having my own laptop which helps me a lot in doing my school works easier.”*
- KI 6: *“This is a big help to me, it helps with school fees and I can buy your school supplies in addition to your daily allowance it is a big help especially to my parents because of this TES, we fixed also our house little by little.”*
- KI 8: *“I have the guts to pursue college.”*
- KI 9: *“I get to have an ATM card for the first time.”*

**Table 2. The process of data abstraction contained in grantees’ interview transcripts**

| Themes                                        |                                          | Categories                                                               | Codes (Frequency of Statements) |
|-----------------------------------------------|------------------------------------------|--------------------------------------------------------------------------|---------------------------------|
| Pre-TES Grant Struggles                       | Economically deprived households         | Unstable income to support the daily needs                               | (10)                            |
|                                               |                                          | Reliance on farming and selling of root crops cannot sustain their needs | (6)                             |
|                                               | Financial Difficulties of the Student    | Giving up dreams and aspirations                                         | (3)                             |
|                                               |                                          | Strive to earn an income for studies                                     | (10)                            |
| The experience as TES Grantee                 | Impact of the Grant to the Family        | A blessing to the family                                                 | (4)                             |
|                                               |                                          | Helps financial capacity                                                 | (6)                             |
|                                               | Impact of the Grant to the Student       | The scholarship grant is a source of hope                                | (5)                             |
|                                               |                                          | Got an ATM card for the first time                                       | (8)                             |
| Withdraw money in the bank for the first time |                                          | (8)                                                                      |                                 |
| Learn how to manage finances                  |                                          | (3)                                                                      |                                 |
| Attitude towards the TES Grant                | Problems Encountered regarding the Grant | Boost confidence and capacity to meet needs                              | (7)                             |
|                                               |                                          | Delay in releasing funds                                                 | (3)                             |
|                                               | Gratitude                                | Difficulty in enrolment for new cash card                                | (2)                             |
|                                               |                                          | Thankful to government                                                   | (8)                             |
| Value                                         | Thankful to the university               | (8)                                                                      |                                 |
|                                               | Optimistic                               | (10)                                                                     |                                 |
|                                               | A motivation to focus on study           | (5)                                                                      |                                 |
|                                               |                                          | Giving importance to the opportunity to study in a university            | (8)                             |

On the other hand, five (5) participants reported about the TES-related problems they encountered such as delayed release of fund (3) and difficulty in the enrolment of new cash card (3).

- KI 8: *“Sometimes the delay of allowance makes me worry of my pending class requirements fees. Especially in this time of pandemic, we really need to buy load weekly for our study.”*
- KI 9: *“I find difficulty in enrolling for the new cash card.”*

Participants described their experiences in the context of impact to the family, themselves as student grantee, and the TES-related problems encountered. Thus, some participants have first time experiences on having an ATM and chance to withdraw in the bank. On the other hand, five participants said that the scholarship grant is a source of hope while seven claimed that the grant boosted their confidence. This is supported with the findings of Yutong (2013) that financial aid has positive effect not only on GPA but influence the outcomes of low-income students and could ultimately encourage them to have higher achievement.



### Attitude towards the Tertiary Education Subsidy

Furthermore, the grantees claimed that they recognize and give value to this government subsidy (C: attitude towards the TES grant). They expressed their gratitude to the government and to their university as well.

KI 3: *"I am very honored and thankful to TES for the help and support in my studies. It means so much to me and I find it hard to express my gratitude."*

KI 4: *"Through this program, thousands of aspiring students like me are encouraged to have a better view in life and value education for the brighter future ahead of us."*

KI 5: *"I greatly appreciate the generous financial support coming from TES and the opportunity to pursue both my educational and extracurricular dreams."*

KI 6: *"Nevertheless, poverty showed me the worth of education and how being a degree holder will change my life."*

KI 9: *"It has been a huge relief to get a grant that prioritize lifting the financial burden of every students. I am very honored and grateful as a beneficiary of TES grants."*

KI 10: *"Finally, I will graduate with the support of TES and I am filled with gratitude with that TES was the best grant that I received in my entire college life. I would like to thank the government and our institution for this scholarship grant. I promise to work harder and be a good citizen as my way of giving back to the country."*

Interestingly, the participants claimed that they were thankful and expressed their gratitude to the persons behind the Republic Act No. 10931 particularly the Tertiary Education Subsidy. Some participants claimed that TES grant motivated them to study harder since they were lucky to be chosen as TES grantee. This claim is in consonance to the statement of Li (2014) that majority of low-income students have increased their GPA once they received financial aid.

### CONCLUSIONS

Based on the conditions under which this study was conducted and the foregoing findings, the following conclusions were drawn: prior to the inclusion to Tertiary Education Subsidy the participants struggled to sustain their school needs, the Tertiary Education Subsidy brought positive experience on the family and the grantee particularly, the TES grantees were thankful and they expressed their gratitude for policy-makers and TES implementers. It also increased the participants' interest to finish tertiary education.

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# A STUDY ON WORK LIFE BALANCE OF WOMEN WITH SPECIAL REFERENCE TO SCHOOL TEACHERS IN ERODE DISTRICT

**Dr.S.Sounthiri**

*Assistant Professor and Head, Department of Commerce (A&F),  
Vellalar College for Women (Autonomous), Erode.*

## ABSTRACT

*Work Life Balance of Women employee has an important subject since the women are inversely contributing the earning responsibility for the advancement of their family. Women are getting into jobs and they continue to work indeed after marriage. A wedded woman has further responsibility than man in taking care of children and family. The working women efficiently overcome delicate situations by their commitment and determination. In the present study an attempt has been made to study the work life balance of women with special reference to school teachers in erode district by using ANOVA. It was found that Educational Qualification and Level of Standard handling have a impact on their personal as well as work life.*

## INTRODUCTION

Work- Life Balance doesn't mean an equal balance. It means the capacity to record the hours of professional and individual life so as to lead a strong and peaceable life. It emphasizes the ethics, attitudes and beliefs of women regarding their age to work in organizing and balancing their work and life. When a woman attains a successful work- life balance, she has job satisfaction and becomes productive and flourishes in her career. But, in certain cases the women not suitable to succeed due to incapacity in balancing her work and life. She is not able to set her superiority. As a result, she withdraws from her work due to simple reasons like taking care of her children, progressed in laws/ parents, and other family pressures. However, she'd be successful women, If the man is seemly to share some of her liabilities. A survey in the UK reveals that the majority of the women had successful WLB, because their spouse participated an equal cooperation both in professional and personal life. With the advancement in technology, and education and revolution in the manufacturing sector, there has been a little change in Indian men too. Both are need to plan their working hours and personal hours so that they lead a healthy life. The women should also educate her children to partake liabilities to make life better and fruitful.

## REVIEW OF LITERATURE

**Vijaya Mani (2013)<sup>1</sup>** has revealed the major factors influencing the Work Life Balance of Women professionals in India such as role conflict, lack of recognition, organizational politics, gender discrimination, elderly and children care issues, quality of health, problems in time management and lack of proper social support.

**Dr. Venkataramanan. M and Abirami. N (2013)<sup>2</sup>** explained that study on Work Life Balance in Arts and science College among women teachers at TamilNadu. The tools for the analysis include Descriptive analysis, Cross tabulation, Chi- square test, weighted average analysis, one way ANOVA, correlation, factor analysis. Their research study help teachers on balancing towards work life. As a result, a teaching faculty member lives in two systems and needs to perform both professional as well as familiar roles.

**Santhana Lakshmi. K (March 2013)<sup>3</sup>** have examined that the Educational institutions should address the Work Life Balance related issues among their staff, specifically women and take a holistic approach to design and implement the policies to support the teaching staff to manage their WLB.

**Rabia Umer and Muhammad Zia-ur-Rehman (2013)<sup>4</sup>** pinpointed the issue of work-life conflict and



work life balances faced by working women. The purpose of their study is to assess the impact of work life balance and work life conflict on life satisfaction of working women. A quantitative approach has been taken. The sample consists of 145 working women of Higher Education University of twin cities out of which 105 questionnaires were returned which yield to response rate of 73%. Results indicated that 43.8% of variance in life satisfaction of working women is due to Work life conflict and work life balance.

### OBJECTIVES

- To study the prevalence of work life balance problem among the women teachers in schools.
- To study the extent to which various factors affects working women's work life balance.

### DATA ANALYSIS AND INTERPRETATION

#### Profile of the Respondents

**Table 1**  
**Demographic Profile of the Respondents**

| Category                         | No.of Respondents | Percentage |
|----------------------------------|-------------------|------------|
| <b>Age</b>                       |                   |            |
| Upto 25 years                    | 28                | 28.0       |
| 26 to 40 years                   | 53                | 53.0       |
| 40 to 55 years                   | 17                | 17.0       |
| Above 55 years                   | 2                 | 2.0        |
| <b>Marital Status</b>            |                   |            |
| Married                          | 64                | 64.0       |
| Unmarried                        | 36                | 36.0       |
| <b>Educational Qualification</b> |                   |            |
| Under Graduate                   | 15                | 15.0       |
| Post Graduate                    | 27                | 27.0       |
| Professionally Qualified         | 58                | 58.0       |
| <b>Monthly Income</b>            |                   |            |
| 5000-10000                       | 36                | 36.0       |
| 10000-25000                      | 56                | 56.0       |
| 25000 & above                    | 8                 | 8.0        |
| <b>Number of Children</b>        |                   |            |
| Unmarried                        | 36                | 36.0       |
| 0                                | 12                | 12.0       |
| 1                                | 42                | 42.0       |
| 2                                | 18                | 18.0       |
| More than 2                      | 2                 | 2.0        |
| <b>Size of the Family</b>        |                   |            |
| Upto 3 members                   | 35                | 35.0       |
| 4-6 members                      | 57                | 57.0       |
| Above 6 members                  | 8                 | 8.0        |

### RESEARCH METHODOLOGY

#### Sample Size

The sample was collected from 100 school teachers. The research targets mainly female teachers from various schools in Erode District.

#### Sampling Technique

Convenience sampling technique was adopted to select the sample respondents.

#### Source of Data

- 1) Primary Data
- 2) Secondary Data

#### Tools for Analysis

- Simple Percentage Analysis
- Weighted Average Score Analysis
- ANOVA



**TABLE 2**  
**RESPONDENTS PREFERENCE LEVEL TOWARDS THEIR PROBLEM IN PERSONAL LIFE**

| WEIGHTED SCORE POINTS                                                         |    | 5   | 4   | 3   | 2  | 1  | TOTAL SCORE | WEIGHTED AVERAGE SCORE | RANK |
|-------------------------------------------------------------------------------|----|-----|-----|-----|----|----|-------------|------------------------|------|
| RANK                                                                          |    | I   | II  | III | IV | V  |             |                        |      |
| FACTORS                                                                       |    |     |     |     |    |    |             |                        |      |
| Miss out any quality time with family or friends because of pressure of work  | X  | 33  | 54  | 9   | 2  | 2  | 414         | 27.6                   | I    |
|                                                                               | WX | 165 | 216 | 27  | 4  | 2  |             |                        |      |
| Don't get enough time for yourself                                            | X  | 22  | 40  | 27  | 2  | 9  | 364         | 24.26                  | V    |
|                                                                               | WX | 110 | 160 | 81  | 4  | 9  |             |                        |      |
| Work affects on your personal life                                            | X  | 38  | 24  | 17  | 10 | 11 | 368         | 24.53                  | IV   |
|                                                                               | WX | 190 | 96  | 51  | 20 | 11 |             |                        |      |
| No time to socialize or relax with your partner/ see family in week           | X  | 27  | 29  | 26  | 8  | 9  | 354         | 23.6                   | IX   |
|                                                                               | WX | 135 | 116 | 78  | 16 | 9  |             |                        |      |
| To work in home most evenings                                                 | X  | 30  | 24  | 24  | 20 | 2  | 360         | 24                     | VI   |
|                                                                               | WX | 150 | 96  | 72  | 40 | 2  |             |                        |      |
| Relaxing and forgetting about work issues is hard                             | X  | 20  | 41  | 22  | 7  | 10 | 354         | 23.6                   | VIII |
|                                                                               | WX | 100 | 164 | 66  | 14 | 10 |             |                        |      |
| Relationship with partner is suffering because of pressure or long hours work | X  | 37  | 28  | 9   | 9  | 17 | 359         | 23.93                  | VI   |
|                                                                               | WX | 185 | 112 | 27  | 18 | 17 |             |                        |      |
| Worry about effect of work stress on health                                   | X  | 25  | 41  | 9   | 7  | 18 | 348         | 23.2                   | X    |
|                                                                               | WX | 125 | 164 | 27  | 14 | 18 |             |                        |      |



|                                                                                            |    |     |     |    |   |    |     |       |     |
|--------------------------------------------------------------------------------------------|----|-----|-----|----|---|----|-----|-------|-----|
| Family are missing out on input either because don't see enough of them/too tired          | X  | 35  | 35  | 22 | 3 | 5  | 392 | 26.13 | II  |
|                                                                                            | WX | 175 | 140 | 66 | 6 | 5  |     |       |     |
| Finding time for hobbies, leisure activities, or maintain family relationship is difficult | X  | 28  | 44  | 15 | 3 | 10 | 377 | 25.13 | III |
|                                                                                            | WX | 140 | 176 | 45 | 6 | 10 |     |       |     |

Source: primary data

## FACTORS INFLUENCING WORK LIFE BALANCE

Table 3

Level of Satisfaction on Personal Life (ANOVA)

| Factors                   | F Value | Table Value | Significance at 5 % level |
|---------------------------|---------|-------------|---------------------------|
| Age                       | 0.813   | 2.70        | Not Significant           |
| Marital Status            | 0.216   | 3.94        | Not Significant           |
| Educational Qualification | 6.234   | 3.09        | Significant               |
| Standard Handle           | 4.821   | 2.70        | Significant               |
| Type of Institution       | 0.210   | 3.09        | Not Significant           |

Table 4

Level of Satisfaction on Work Life (ANOVA)

| Factors                   | F Value | Table Value | Significance at 5 % level |
|---------------------------|---------|-------------|---------------------------|
| Age                       | 0.953   | 2.70        | Not Significant           |
| Marital Status            | 0.78    | 3.94        | Not Significant           |
| Educational Qualification | 5.902   | 3.09        | Significant               |
| Standard Handle           | 4.966   | 2.70        | Significant               |
| Type of Institution       | 1.497   | 3.09        | Not Significant           |

## FINDINGS OF THE STUDY

- The majority (53%) of the respondents are belonging 26-40 years.
- 64% of the respondents are in the category of married.
- The majority (58%) of the respondents are professionally qualified.
- 56% of majority respondents earn 10000-25000 as their monthly income.
- Majority (42%) of the respondents are having 1 child.
- 57% of the respondents are living with 4-6 members.
- It is clear from the weighted Average Score analysis that the maximum of respondents agrees that because of pressure in work they miss their quality time with their family and friends as the main factor which affects the personal life.

- From the ANOVA analysis, it is Concluded that Age, Marital Status and Type of Institution Does not have a significant impact on the level of satisfaction of both personal life and work life. Whereas, Educational qualification and Standard Handle have a significant impact on the level of satisfaction of both Personal and work life.

## CONCLUSION

Work-life balance policies are most likely to be successfully mainstreamed in institutions which have a clear understanding the importance of work-life balance for all teachers. Whatever the chosen course, it is hoped that this research project report will form a stepping stone in the process and provide a basis for reflection and debate on work-life balance issues in schools in Erode District.

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## THE ROLE OF YOUNG VOLLYBOL PLAYERS IN THE DEVELOPMENT OF PHYSICAL QUALITIES IN MOTION

**Boltaev Azam Akramovich<sup>1</sup>, Kadirov Abdurashid Abdug'anievich<sup>2</sup>,  
Raximov Umorbek Ikromboyevich<sup>3</sup>**

*<sup>1,2,3</sup>Teacher of the Faculty of taekwondo and sports activities of the National University of Uzbekistan named after Mirzo Ulugbek*

### ANNOTATION

*The article provides a description of the scientific and analytical work on the physical development of volleyball players by outdoor games.*

**KEY WORDS:** *Outdoor games, physical qualities of volleyball players, special endurance and speed.*

**Аннотация:** *Мақолада волейболчиларнинг ҳаракатли ўйинлар орқали жисмоний ривожланиши бўйича илмий-таҳлилий ишлар тавсифи берилган.*

**Аннотация:** *В статье дается описание научно-аналитической работы по физическому развитию волейболистов с помощью подвижных игр.*

**Калит сўзлар:** *Ҳаракатли ўйинлар, волейболчиларни жисмоний сифатлари, махсус чидамкорлик ва тезкорлик сифати.*

**Ключевые слова:** *Подвижных игры, физические качества волейболистов, особая выносливость и скорость.*

After Uzbekistan gained its independence, like all other spheres, physical education and sports have been fully formed in a new direction and are writing high-altitude wings. In Fact, Our Compatriot Sh. On the initiative of Mirziyoyev, a number of laws and decisions on physical education and sports were adopted in recent years in order to educate the younger generation healthy.[1]

Training of young athletes is a complex pedagogical process with a multi-stage, which requires the organization of training on a scientific basis. It is important that the volume of physical and technical-tactical exercises to be performed during training of severe plan and train in accordance with the age, physical and functional capabilities of the engaged children.

The size of this exercise, bravour, the time to return and continue should be based on biological laws. If the load of the exercise is more than the capacity of the child, then such a load can adversely affect the body of this child. On the contrary, it is inevitable that the process of formation will be

slowed down if the load is less than the capacity. It can be said that the phenomenon of " Game " begins almost from the birth stage of a person's life. The baby responds to certain sounds, sounds and gestures: laughs, acts otherwise, strives to catch certain things. Over time, such imitations and actions are formed from the content, efficiency and quality aspects. Then, children compete in chopsticks, jumps, precise movement (sniper), playing games that they know or not. The Games discover a wide range of significance in the mental, aesthetic, physical and functional formation of children. The games are divided into different categories, with their co-existence (universality), multiplicity and wide expediency. In particular, games that develop physical attributes, speech, pronunciation, marksmanship, entrepreneurship, calculus and et cetre characterization these are included in the sentence. But no matter what kind of game, it will have an action element or a set of actions. [1]

Moving games are fundamentally different from sports games in terms of their content and



essence. Moving games do not require a specific normative causes, such as special preparation for sports games, the rule of a particular competition, sports clothing, duration, area, composition of participants. Only one moving game can be played in a different place, over time, in clothes, in composition (in terms of number and age). The most important thing is that free and voluntary movements (non-standard direction of movement, scream, cheerfulness and others), which are observed during the action game, cause a positive emotional state (reaction). This condition, in turn, contributes to the fact that in sports training (or when performing a standard series of exercises) faster "bypasses" the qualities of fatigue in the body, or appears later. In summary, the above-mentioned theoretical considerations for the action games in terms of their physical education and sports [1] determines the capacity. This means that the importance of mobility in the training of young athletes, including the national games of the people, cannot be overemphasized.

In recent years, numerous scientific publications have been published that prove that moving games are an extremely effective tool for training athletes, the formation of movement skills and physical qualities. But at the same time, in the training of young volleyball players, scientific research, which reveals the possibility of using moving games in the development of their physical qualities, is extremely limited. In modern volleyball, effective playing and achieving high results can only be done with a well-developed physical quality evasion. Particularly important in this regard is the quality of durability, including Game durability and jumping durability. Zheleznyak Yu. The most notable among the physical attributes for volleyball players in the opinion of D is jumping endurance. But, no matter what kind of special endurance (jumping, playing, fast endurance) it can be formed only on the basis of general endurance. Therefore, it is worthwhile to analyze the scientific data on the problems of developing endurance in general along with the quality of agility. It should be said that the effectiveness of the formation of sports training is directly related to develop interconnection of all physical attributes. Another important condition in this matter is that the level of development of physical qualities should be assessed with the help of purposeful test exercises.

To assess the physical qualities of volleyball players recommended the following test exercises:

- running from high start to 30 meters;
- output without the help of feet on the rope (5m);
- to determine the strength of the arm-shoulder and waist muscles;
- jump up without being in place;

- Running up to 2x800 meters;
- lifting the mannequin at great speed (20 C).

The authors, based on the results of their research, divided the wrestlers into 3 Conditional groups: fighters with the property of "quick-force"; wrestlers with the property of special endurance and wrestlers who "universal" it.

Nabatnikova M. Eat it. as a result of research on volleyball players of different ages and qualifications for many years, he argues that physical qualities are directly related to technical skills and the process of competition (shooting). He believes that the higher the physical qualities are formed, the more perfect the sports skills will grow. [1]

Consequently, the use of physical training exercises in the process of training requires the attention of each athlete to the age, characteristics of the sport and the qualification and pedigree of the athlete. Therefore, the issue of training of qualified athletes is provoked by the fact that in the process of sports training consists of a set of physical exercises aimed at a specific goal.

Physical training, which is planned for the purpose of training qualified athletes, is one of the most important factors in the formation of technical and tactical skills and achieving a high result during the competition. But, in sports practice, there are often cases when not always the expected result is achieved when developing the qualities of movement in accordance with the planned physical exercises. One of the main reasons for this is that the volume of those or those physical exercises that are used in training, and severe, as well as the degree of influence of these indicators on the body of the participants (the reaction of the body to the opposite reaction to the installation) are not objectively evaluated. Therefore, the compatibility of the physical installation (physical exercises), which is used in the process of training, with the functional capabilities of the organism of the participants, should be taken into account, creates the opportunity to plan this installation for its intended purpose. [1]

In the preparation of qualified athletes, special attention is paid to two, inextricably linked sides of the movement function:

- training and improvement of technical and tactical skills of athletes;
- educating the physical qualities of the athlete in accordance with the characteristics of the chosen sport.

Of course, in the "big" sport, this is also necessary. However, it is unlikely that such a practice and the method of training based on it will slow down the effectiveness of training of qualified athletes and achieving a high competition result. Because, due to the fact that each sport has its own unique and individual characteristics, the quality of endurance in one sport plays a leading role, or the



quality of elasticity in a third sport becomes the main thing.

However, from the stated opinion does not come to the conclusion that in a particular sport a certain physical quality is very necessary, and in another it is not important. On the contrary, each adjective will have a small, but significant "share" in a certain sporting situation.

In the preparation of qualified volleyball players, in particular, special qualities of endurance and speed play an important role in the formation of these qualities in the training process with the help of moving games.

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